STIC Search Report
EIC 1700

STIC Database Tracking Number: 160792

TO: Jill M Gray **Location: REM 10A64** **Art Unit : 1774** **August 9, 2005** **Case Serial Number: 10/808873**	**From: Les Henderson** **Location: EIC 1700** **REM 4B28 / 4A30** **Phone: 571-272-2538** **Leslie.henderson@uspto.gov**

Search Notes

I changed the serial number from 10/812,943 to 10/808,873 in the search log database per our conversation.

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact ***the EIC searcher or contact:***

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

Access DB# 160792

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: J. 11 Gray Examiner #: 66983 Date: 7/25/05 2042
Art Unit: 1774 Phone Number 302-1524 Serial Number: ~~10/942,943~~ 10/808873
Mail Box and Bldg/Room Location: 10A64 Results Format Preferred (circle): (PAPER) DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bi-current reflective Synthetic filament yarn and method of producing the same

Inventors (please provide full names): Kang, Kyung-Joong

Earliest Priority Filing Date: 5/17/02

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Pls search attached clms

****

STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: KM	NA Sequence (#)		STN	
Searcher Phone #:	AA Sequence (#)		Dialog	$838.33
Searcher Location:	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	Bibliographic	✓	Dr.Link	
Date Completed: 8/9/05	Litigation		Lexis/Nexis	
Searcher Prep & Review Time: 30	Fulltext		Sequence Systems	
Clerical Prep Time: 30	Patent Family		WWW/Internet	
Online Time: 140	Other		Other (specify)	

PTO-1590 (8-01)

Express Mail:
EV398341251US

Claims

What is claimed is:

1. A recurrent reflective synthetic filament yarn produced by the following process including the steps of:

melt-spinning a mixture of glass beads and a synthetic fiber resin through a spinneret, said beads being vacuum-metalized with a material having a reflection function;

positioning an electric field around the spinneret; and

passing said filament through the electric field before said filament is solidified, whereby said glass beads in said filament rotate so that said metalized parts of the glass beads all point in a same direction.

2. The yarn of claim 1, wherein said yarn filament comprises substantially 5 to 25 wt% of said glass beads.

3. The yarn of claim 1, wherein each of the glass beads is a spherical shape having a bead size of 30 to 50 μm, and a refractive index of 1.5 to 2.2.

4. The yarn of claim 1, wherein the material having the reflective function is selected from the group

consisting of aluminum, nickel, and silver.

5. A recurrent reflective synthetic filament yarn;

said filament including vacuum-metalizing spherical glass beads each having a bead size of 30 to 50 μm and a refractive index of 1.5 to 2.2, wherein 1/4 to 1/2 of an entire surface area of the spherical glass beads are vacuum-metalized with a material, said material having a reflection function;

said filament including a synthetic resin;

wherein 5 to 25 wt% of said filament is said glass beads and 95 to 75 wt% of said filament is said synthetic fiber resin;

wherein said filament is melt-spun through a spinneret;

said yarn produced by the following method including the steps of:

passing said filaments through an electric field around the spinneret before said filaments are solidified, so as to rotate the glass beads contained in the filaments such that metalized parts of the glass beads all point in a same direction.

6. The yarn of claim 5 wherein said spinneret having a nozzle and nozzle holes, said method comprising the steps

of:

installing a positive plate and a negative plate under the nozzle holes of the spinneret such that the positive plate and the negative plate face each other and are spaced from each other at an interval of one to five mm; and

applying a voltage of 3000 to 20000 V and a current of three to five mA to the positive plate and negative plate, thereby forming the electric field.

7. The yarn of claim 6, wherein the nozzle holes of the spinneret are aligned in one or two rows.

8. The yarn of claim 5, wherein the method comprising the steps of:

adding 0.2 to 0.5 wt% of dioctylphthalate as a softener and 0.2 to 0.5 wt% of Ca antiadditive as a dispersing agent into the synthetic fiber resin to uniformly mix the glass beads with the synthetic fiber resin, to provide softness to the synthetic fiber resin during the melt-spinning of a mixture of the glass beads and synthetic fiber resin, and to improve the softness of the recurrent reflective synthetic filament yarn.

9. The yarn of claim 6, wherein the method comprising the steps of:

adding 0.2 to 0.5 wt% of dioctylphthalate as a softener and 0.2 to 0.5 wt% of Ca antiadditive as a dispersing agent into the synthetic fiber resin to uniformly mix the glass beads with the synthetic fiber resin, to provide softness to the synthetic fiber resin during the melt-spinning of a mixture of the glass beads and synthetic fiber resin, and to improve the softness of the recurrent reflective synthetic filament yarn.

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? show files
File   2:INSPEC 1969-2005/Jul W5
         (c) 2005 Institution of Electrical Engineers
File   6:NTIS 1964-2005/Jul W5
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2005/Jul W5
         (c) 2005 Elsevier Eng.  Info. Inc.
File  31:World Surface Coatings Abs 1976-2005/Jul
         (c) 2005 PRA Coat. Tech. Cen.
File  35:Dissertation Abs Online 1861-2005/Jul
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         (c) 2005 The Dialog Corporation
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         (c) 2005 American Institute of Physics
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         (c) 2005 Elsevier Science Ltd.
File  94:JICST-EPlus 1985-2005/Jun W3
         (c)2005 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2005/Jul W1
         (c) 2005 FIZ TECHNIK
File 103:Energy SciTec 1974-2005/Jul B2
         (c) 2005 Contains copyrighted material
File 144:Pascal 1973-2005/Jul W5
         (c) 2005 INIST/CNRS
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File 323:RAPRA Rubber & Plastics 1972-2005/Jul
          (c) 2005 RAPRA Technology Ltd
File 347:JAPIO Nov 1976-2005/Apr(Updated 050801)
         (c) 2005 JPO & JAPIO
File 399:CA SEARCH(R) 1967-2005/UD=14307
         (c) 2005 American Chemical Society
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200550
         (c) 2005  Thomson Derwent
? ds

Set     Items   Description
S1      18724   AU=LO ?
S2      13641   AU=SANTOS ?
S3          0   AU=KRUESZEWSKI ?
S4         10   S1 AND S2
S5         16   AU=SANTOS RAUL?
S6          2   S5 AND S4
S7    7925267   METAL? ? OR METALLIZ?
S8          7   S7 AND S4
S9    3389552   FIBER? OR FIBR? ? OR FILAMENT? OR THREAD? OR STRAND? OR RI-
             BBON? OR YARN?
S10   1791905   REFLECT?
S11     16313   S9(3N)S10
S12         8   RECUR?(3N)S11
S13         1   VACUUM(2N)L7
S14   1671649   METALLI? OR METALI?
S15         2   VACUUM(2N)L13
S16      5777   VACUUM(N)(METAL? ? OR METALLI? OR METALI?)
S17         1   S16 AND S12
S18         4   S16 AND S11
S19     37812   SPIN?(N)MELT? OR MELTSPIN? OR SPINMELT?
S20     40015   SPIN????(N)MELT?
S21     40505   S20 OR S19
S22     12790   SPINNERET?
S23        35   S11 AND S21
S24        21   S11 AND S22
S25         7   S23 AND S24
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S26          2   VACUUM? AND S25
S27    8662390   S7 OR S14
S28         49   S23 OR S24
S29         10   S28 AND S27
S30          4   S28 AND VACUUM?
S31         28   S12 OR S13 OR S15 OR S17 OR S18 OR S25 OR S26 OR S29 OR S30
S32      27624   GLASS?(2N)BEAD? OR GLASSBEAD?
S33         47   S32 AND S11
S34          2   S33 AND (S21 OR S22)
S35         28   S31 OR S34
S36      56973   (WEIGHT? OR WT?)(2N)(PERCENT? OR PER()CENT? ? OR PCT?)
S37          0   S36 AND S35
S38          0   S36 AND S33
S39          0   S36 AND S28
S40         11   S36 AND S11
S41      40221   (ELECTROMAG? OR ELECTRO()MAGNETI? OR EM)(2N)SHIELD?
S42         39   S41 AND S11
S43          6   S41 AND S40
S44          0   S41 AND S35
S45          0   S41 AND S28
S46     295371   REFRACT?(2N)(INDEX? OR INDICES)
S47         34   S35 OR S43
S48          1   S46 AND S47
S49         34   S47 OR S48
S50       1277   S46 AND S11
S51          2   S50 AND S23
S52          3   S50 AND S24
S53         37   S49 OR S51 OR S52
S54   10104429   COAT? OR JACKET? OR CASING? OR FILM? OR THINFILM? OR LAYER?
              OR SHEATH?
S55     529834   (ALUMINUM? OR ALUMINIUM? ? OR AL OR NICKEL? OR NI OR SILVE-
             R? OR AG)(2N)S54
S56        185   S55 AND S11
S57          0   S53 AND S55
S58          0   S55 AND S12
S59      25174   (ALUMINUM? OR ALUMINIUM? ? OR AL OR NICKEL? OR NI OR SILVE-
             R? OR AG)(2N)REFLECT?
S60          1   S59 AND S53
S61        360   S11 AND (S59 OR S55)
S62        128   S61 AND (RECUR? OR VACUUM? OR S7 OR S16 OR S14 OR S19 OR S-
              20 OR S32 OR S36 OR S41 OR S46)
S63          9   S62 AND S32
S64          2   S62 AND S41
S65          1   S62 AND (S21 OR S22)
S66          0   S62 AND RECUR?
S67         47   S53 OR S60 OR S63:S65
S68     744868   (ELECTRIC OR ELECTROMAG? OR ELECTRO()MAGNETI? OR EM)(2N)FI-
             ELD?
S69          7   S68 AND S67
S70          0   S68 AND S62
S71         20   (POLYMER? ? OR HOMOPOLYMER? OR COPOLYMER? OR TERPOLYMER?? -
              OR RESIN? OR GUM? OR POLYM) AND S67
S72         36   (POLYMER? ? OR HOMOPOLYMER? OR COPOLYMER? OR TERPOLYMER?? -
              OR RESIN? OR GUM? OR POLYM) AND S62
S73         78   S67 OR S69 OR S71 OR S72
S74       8268   DIOCTYLPHTHALAT? OR DIOCTYL(2N)PHTHALAT?
S75          2   S74 AND S73
S76      14240   (CALCIUM? OR CA)(2N)(SUSPEN? OR DISPERS? OR COLLOID? OR EM-
             ULS? OR MICROEMULS? OR SLURR?)
S77          1   S76 AND S73
S78         78   S73 OR S75 OR S77
S79       2079   (NOZZL? OR JET?) AND S22
S80          2   S79 AND ((POS OR POSITIV? OR NEG OR NEGATIV?)(2N)PLATE? ?)
S81          0   S80 AND S78
S82          2   S79 AND S80
S83         80   S78 OR S80 OR S82
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S84 67 RD (unique items)
? ? t s84/7,de/1-35

84/7,DE/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

7972985 INSPEC Abstract Number: C2004-07-6130S-002
Title: AutoLogout for application security
Author(s): Lurie, J.
Journal: Dr. Dobb's Journal vol.28, no.10 p.50-1
Publisher: CMP Media LLC,
Publication Date: Oct. 2003 Country of Publication: USA
CODEN: DDJSDM ISSN: 1044-789X
SICI: 1044-789X(200310)28:10L.50:AAS;1-5
Material Identity Number: B719-2003-009
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: While almost everyone knows what computer security means, few understand application security. For developers who work on highly sensitive projects, application security is critical. Many software contracts have software security requirements that call for the ability of an application to log itself out after a certain period of inactivity. This minimizes the likelihood of a security breach as the result of an application being left running on a computer. Users who go to lunch without logging out or locking the workstation pose a potential security breach. An application, thus, must be able to detect inactivity and close itself down, a capability referred to as "AutoLogout". The approach we present uses ***threading***, ***recursion***, ***reflection***, private constructors, static constructors, Windows Forms, Events, Delegates, synchronization, and more to accomplish the task. Although this design is implemented using C#, it could just as well be used with VB.NET or Java.
Subfile: C
Descriptors: authorisation; C language; data privacy

84/7,DE/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

7272359 INSPEC Abstract Number: A2002-13-4110H-007, B2002-06-5230-021
Title: The influence of fiber orientation on ***electromagnetic*** ***shielding*** in liquid-crystal ***polymers***
Author(s): Jou, W.S.; Wu, T.L.; Chiu, S.K.; Cheng, W.H.
Author Affiliation: Dept. of Mold & Die Eng., Nat. Kaohsiung Univ. of Appl. Sci., Taiwan
Journal: Journal of Electronic Materials vol.31, no.3 p.178-84
Publisher: TMS; IEEE,
Publication Date: March 2002 Country of Publication: USA
CODEN: JECMA5 ISSN: 0361-5235
SICI: 0361-5235(200203)31:3L.178:IFOE;1-H
Material Identity Number: J246-2002-004
U.S. Copyright Clearance Center Code: 0361-5235/02/$7.00
Language: English Document Type: Journal Paper (JP)
Treatment: Theoretical (T); Experimental (X)
Abstract: The influence of conductive carbon-fiber orientation and ***weight*** ***percentage*** on the ***electromagnetic*** (***EM***) ***shielding*** effectiveness (SE) in liquid-crystal ***polymer*** (LCP) composites was investigated experimentally and theoretically. The experimental results show that the SE of LCP composites with longitudinal fiber orientation is higher than random fiber orientation under the same ***weight*** ***percentage*** of carbon fibers filled. This is because longitudinal fiber orientation is parallel to the ***electric*** ***field*** of the incident EM wave, and most of the energy of the incident wave is ***reflected*** by the longitudinal ***fiber***. In comparison with

nylon66 composites, the SEs of LCP composites with longitudinal fiber orientation are also higher than nylon66 composites with the same content of carbon fibers. Furthermore, the SE of 20% conductive carbon-fiber-filled LCP composites was measured to be 50 dB at a frequency of 0.3 GHz and 53 dB at 1 GHz, which is at least 10 dB higher than that of nylon66 composites. The SE predicted by theoretical models and measured by experiments was in good agreement for carbon-fiber-filled LCP composites of longitudinal and random fiber orientations. (21 Refs)
Subfile: A B
Descriptors: carbon fibre reinforced composites; ***electromagnetic*** ***shielding***; liquid crystal ***polymers***

84/7,DE/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

6955269 INSPEC Abstract Number: A2001-14-8130F-009
Title: Microstructure of a rapidly solidified Ti/sub 75/Ni/sub 25/ alloy by ***melt***-***spinning*** process
Author(s): Radojevic, B.B.
Author Affiliation: Center for Multidisciplinary Studies, Belgrade Univ., Serbia
Journal: Materials Science & Engineering A (Structural Materials: Properties, Microstructure and Processing) Conference Title: Mater. Sci. Eng. A, Struct. Mater., Prop. Microstruct. Process. (Switzerland) vol.A304-A306 p.385-8
Publisher: Elsevier,
Publication Date: 31 May 2001 Country of Publication: Switzerland
CODEN: MSAPE3 ISSN: 0921-5093
SICI: 0921-5093(20010531)A304A306L.385:MRST;1-D
Material Identity Number: M711-2001-012
U.S. Copyright Clearance Center Code: 0921-5093/2001/$20.00
Conference Title: RQ10, Tenth International Conference on Rapidly Quenched and Metastable Materials
Conference Date: 23-27 Aug. 1999 Conference Location: Bangalore, India
Document Number: S0921-5093(00)01426-X
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Experimental (X)
Abstract: A metastable crystalline Ti/sub 75/Ni/sub 25/ alloy in ribbon form is obtained by rapid solidification process. With the control of ***melt***-***spinning*** parameters different microstructures are formed, pointing to complex solidification effects in samples. The microstructural evolution as a function of cooling rate is explored using transmission electron microscopy. Temperatures of phase transitions are determined by different DSC analyses. X-ray diffraction patterns from the "disc side" and "air side" of the ribbon are analyzed to determine the difference in the phase composition. The correlation between cooling rates and the nature of solidification through the ***ribbon*** thickness as ***reflected*** in various microstructures is explained. (20 Refs)
Subfile: A
Descriptors: differential scanning calorimetry; ***metallic*** glasses; nickel alloys; rapid solidification; titanium alloys; transmission electron microscopy

84/7,DE/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

5527672 INSPEC Abstract Number: A9709-4281P-001, B9705-7230E-001
Title: ***Reflection*** intensity optical ***fiber*** sensors for the mid-infrared

Author(s): Tugendhaft, I.; Bornstein, A.; Weissman, Y.; Hardy, A.
Author Affiliation: Electro-Opt. Div., Soreq Nucl. Res. Center, Yavne, Israel
Journal: Applied Optics vol.36, no.6 p.1297-302
Publisher: Opt. Soc. America,
Publication Date: 20 Feb. 1997 Country of Publication: USA
CODEN: APOPAI ISSN: 0740-3224
SICI: 0740-3224(19970220)36:6L.1297:RIOF;1-8
Material Identity Number: A132-97007
U.S. Copyright Clearance Center Code: 0740-3224/97/061297-06$10.00/0
Language: English Document Type: Journal Paper (JP)
Treatment: Theoretical (T); Experimental (X)
Abstract: Two kinds of reflection intensity sensor made of chalcogenide glass fiber for the mid-IR region are demonstrated. One is a double-***fiber*** ***reflection*** sensor based on two tied fibers with a gold-coated hollow ***metal*** waveguide connected to the far end of the fibers. The other is a single-***fiber*** ***reflection*** sensor based on contact couplers. These reflectance sensors were coupled to a Fourier-transform IR spectrometer by a unique accessory based on nonimaging concentrators. This setup was built to measure absorption spectra of a ***polymer*** ***coating*** of an ***aluminum*** can and a sheet of drafting paper. A theoretical model treating the ratio between the signal from the target and the background is introduced. This model was helpful in deriving the sensitivity characteristics of the sensors from experimental absorption peak heights. Hence, the absorption peaks heights that we obtained using a single-***fiber*** ***reflection*** sensor with a symmetric coupler were nearly 50% relative to those obtained with a double-***fiber*** ***reflection*** sensor. (22 Refs)
Subfile: A B
Descriptors: chalcogenide glasses; fibre optic sensors; Fourier transform spectrometers; glass fibres; infrared spectrometers; optical fibre couplers ; optical fibre theory; reflectivity; sensitivity

84/7,DE/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC

5524298 INSPEC Abstract Number: A9708-8140N-058
Title: Residual strength of centrally cracked ***metal***/fiber composite laminates
Author(s): Jin, Z.H.; Batra, R.C.
Author Affiliation: Dept. of Eng. Sci. & Mech., Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA
Journal: Materials Science & Engineering A (Structural Materials: Properties, Microstructure and Processing) vol.A216, no.1-2 p.117-24
Publisher: Elsevier,
Publication Date: 15 Oct. 1996 Country of Publication: Switzerland
CODEN: MSAPE3 ISSN: 0921-5093
SICI: 0921-5093(19961015)A216:1/2L.117:RSCC;1-O
Material Identity Number: M711-97003
U.S. Copyright Clearance Center Code: 0921-5093/96/$15.00
Language: English Document Type: Journal Paper (JP)
Treatment: Theoretical (T)
Abstract: The residual strength of ***metal***/fiber composite laminates (MFCLs) with a central crack is studied. The laminate is a sandwich with a fiber reinforced epoxy ply (prepreg) in the middle and an ***aluminum*** alloy ***layer*** on each of the outer surfaces. Dugdale strip yielding zones in the ***aluminum*** ***layers*** at the crack tip are assumed to take into account ductile deformations of the ***metal*** layers. It is also assumed that a strip damage zone in the prepreg layer is developed at the crack tip ***reflecting*** matrix cracking and ***fiber*** breakage and pull-out. Residual strengths for the centrally cracked laminates are calculated numerically. It is found that the residual strength of CARALL (carbon fiber reinforced ***polymer***/aluminum laminate) is always higher

than that of ARALL/sup (R)/ (using aramid fiber instead of carbon fiber) for both infinite and finite width plates in the range of initial crack lengths considered. The strengths of CARALL with high elongation (HE) fiber are also higher than those of their ***metal*** counterparts. The results for ARALL predicted from the present model agree well with the existing experimental observations. The residual strength results for cracked MFCLs suggest that CARALL, especially with HE fibers, may replace aluminum alloys in lower aircraft wings and fuselage because of its higher residual strength and lower density. However, its fatigue resistance, impact residual properties and resistance to corrosion and other environmental effects need to be studied thoroughly. (27 Refs)
Subfile: A
Descriptors: aluminium; carbon fibre reinforced composites; corrosion; crack-edge stress field analysis; environmental degradation; fatigue; fracture toughness; impact strength; laminates; numerical analysis; ***polymers***; tensile strength; Young's modulus

84/7,DE/6 (Item 6 from file: 2)
DIALOG(R)File 2:INSPEC

4650956 INSPEC Abstract Number: A9411-8120G-003
Title: Effect of processing conditions on the ribbon geometry and viscous flow behaviour of Fe/sub 40/Ni/sub 40/Si/sub 6/B/sub 14/ amorphous alloy
Author(s): Russew, K.; Stojanova, L.; Lovas, A.
Author Affiliation: Inst. for Metal Sci., Bulgarian Acad. of Sci., Sofia, Bulgaria
Journal: International Journal of Rapid Solidification vol.8, no.2 p.147-59
Publication Date: 1994 Country of Publication: UK
CODEN: IJRSEO ISSN: 0265-0916
U.S. Copyright Clearance Center Code: 0265-0916/94/$10.00
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: The effect of processing parameters melt superheat, Delta T/sub m/, and substrate surface velocity, Vs, on the width, w, and thickness, t, of chill block melt spun Fe/sub 40/Ni/sub 40/Si/sub 6/B/sub 14/ glassy alloys and their subsequent viscous flow behaviour under continuous heating conditions at a heating rate of 20 K/min have been studied. It is concluded that melt superheat has no effect on the melt flow rate through the orifice, whereas it strongly affects the ribbon thickness. A twofold increase in V/sub s/ exerts a stronger effect on the viscous flow behaviour of Fe/sub 40/Ni/sub 40/Si/sub 6/B/sub 14/ glassy alloy than the effect of an increase in melt superheat by a factor of 10. ***Melt*** ***spinning*** at higher melt superheat values up to 400 K above the melting temperature T/sub m/ leads to additional annealing and structural relaxation during the casting and subsequent air cooling of the glassy ***ribbons***. This is ***reflected*** by higher viscosity values of the glassy alloy in the temperature range between ambient and the glass transition temperature T/sub g/. The empirical equation of Vogel-Fulcher-Tammann is a good approximation for describing the temperature dependence of viscosity in the temperature range T/sub g/ to T/sub m/. (20 Refs)
Subfile: A
Descriptors: amorphous state; annealing; boron alloys; cooling; glass structure; glass transition (glasses); iron alloys; ***melt*** ***spinning***; melting; ***metallic*** glasses; nickel alloys; plastic flow; relaxation; silicon alloys

84/7,DE/7 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05935497

E.I. No: EIP01456722735
Title: Preparation of trilobal SiC fibers with radar-absorbing properties
Author: Wang, Y.D.; Feng, C.X.; Wang, J.; Song, Y.C.; Wang, J.; Yao, M.; He, Y.C.; Xue, J.G.; Long, J.F.
Corporate Source: Dep. of Mater. Eng. Natl. Univ. of Defense Technol., Changsha 410073, China
Source: Fuhe Cailiao Xuebao/Acta Materiae Compositae Sinica v 18 n 1 February 2001. p 42-45
Publication Year: 2001
CODEN: FCXUEC ISSN: 1000-3851
Language: Chinese
Document Type: JA; (Journal Article) Treatment: X; (Experimental)
Journal Announcement: 0111W2
Abstract: Trilobal polycarbosilane (PCS) fibers were prepared by ***melt*** ***spinning*** PCS precursor through Y-shaped ***spinneret***. After curing in air and performing heat treatment under N//2 atmosphere, trilobal silicon carbide fibers were manufactured. The effects of spinning temperature and velocity on the degree of profile of fiber were analyzed. Preparation conditions such as curing, heat-treatment and microwave-absorbing properties were studied. Compared with circular SiC fibers, these fibers exhibit better mechanical properties and microwave-absorbing properties. The structural radar-absorbing materials, composed of these ***fibers*** ***resin***, exhibit a ***reflection*** attenuation amount of 10-20 dB in the range of 8-18 GHz. (Edited abstract) 6 Refs.
Descriptors: *Fibers; Silicon carbide; Curing; Heat treatment; Radar; Absorption; Spinning (fibers)

84/7,DE/8 (Item 1 from file: 31)
DIALOG(R)File 31:World Surface Coatings Abs
(c) 2005 PRA Coat. Tech. Cen. All rts. reserv.

00506652 WSCA ABSTRACT NUMBER: 97-04685 WSCA ID NUMBER: 444685
Fluorinated random ***copolymers*** useful for low ***refractive*** ***index*** film.
PATENT ASSIGNEE: NIPPON GOSEI GOMU CO;
PATENT INFORMATION: Japanese Unexamined Patent , 17 pp: Jap. Pat. Abs (Unexamined) 1996, Vol 96 No 24, Gp G, 22.
PATENT (NUMBER,DATE): JP 8092323 19960000
PUBLICATION YEAR: 1996

ABSTRACT: The hexafluoropropylene ***copolymer*** has high transparency, a ***refractive*** ***index*** below 1.4 and weather resistance. It may be used as a protective film on colour filters and solar cells, as ***optical*** ***fibre*** ***sheathing***, in ***reflective*** protective coating, etc. It contains 20-70 mole % of the fluoro-olefin and 1-20 mole % of a hydroxylic monomer, together with another monomer. The content of fluorine is 40-70 weight %; and its intrinsic viscosity in dimethylacetamide at 25 deg. C is 0.05-2 dl/g.

DESCRIPTORS: Hexafluoropropylene ***Copolymers***; ***Fluoropolymers***; ***Refractive*** ***Index***; Optical Properties

84/7,DE/9 (Item 2 from file: 31)
DIALOG(R)File 31:World Surface Coatings Abs
(c) 2005 PRA Coat. Tech. Cen. All rts. reserv.

00453938 WSCA ABSTRACT NUMBER: 92-01430 WSCA ID NUMBER: 341430
Role of interphase on adhesion of coatings and composites.
ISHIDA H
Proc. Adhesion Society 14th Annual Meeting, Clearwater (Florida) 1991 , 106-10: RAPRA Abs 1991, Vol 28 No 7, Abs 0076815C.
1991

ABSTRACT: Various coatings systems on ***metallic*** substrates were investigated to illustrate the uniqueness of each system as well as their common features. The systems included epoxy coatings on steel and copper, a polyimide coating on copper, modified polyurethane ***coatings*** on ***aluminium***, and an epoxy coating on a carbon ***fibre***. ***Reflectance*** Fourier transform infrared spectroscopy was discussed as a characterisation technique. 20 refs.

DESCRIPTORS: Adhesion; Interfaces

84/7,DE/10 (Item 1 from file: 62)
DIALOG(R)File 62:SPIN(R)

00730608
Reflection intensity optical ***fiber*** sensors for the mid-infrared
Tugendhaft, I. ; Bornstein, A. ; Weissman, Y. ; Hardy, A.
Electro-Optics Division, Soreq Nuclear Research Center, Yavne 81800, Israel ; Department of Physical Electronics, Faculty of engineering, Tel Aviv University, Ramat Aviv 69978, Israel
APPL. OPT.; 36(6),1297-1302 (20 Feb. 1997) CODEN: APOPA
Work Type: APPARATUS; EXPERIMENTAL
Two kinds of reflection intensity sensor made of chalcogenide glass fiber for the mid-IR region are demonstrated. One is a double-***fiber*** ***reflection*** sensor based on two tied fibers with a gold-coated hollow ***metal*** waveguide connected to the far end of the fibers. The other is a single-***fiber*** ***reflection*** sensor based on contact couplers. These reflectance sensors were coupled to a Fourier-transform IR spectrometer by a unique accessory based on nonimaging concentrators. This setup was built to measure absorption spectra of a ***polymer*** ***coating*** of an ***aluminum*** can and a sheet of drafting paper. A theoretical model treating the ratio between the signal from the target and the background is introduced. This model was helpful in deriving the sensitivity characteristics of the sensors from experimental absorption peak heights. Hence, the absorption peaks heights that we obtained using a single-***fiber*** ***reflection*** sensor with a symmetric coupler were nearly 50 (percent) relative to those obtained with a double-***fiber*** ***reflection*** sensor. (Copyright) 1997 Optical Society of America
Descriptors: fibre optic sensors ; infrared spectra ; reflectometry ; glass fibres

84/7,DE/11 (Item 1 from file: 67)
DIALOG(R)File 67:World Textiles

00190640 WORLD TEXTILE NO: 1932820 SUBFILE: UMIST Library
Yarn for the production of knitted articles able to attenuate low and medium frequency ***electromagnetic*** ***fields***
AUTHOR(S): Lineapiu' SpA; Coppini G.
1993, 1993
DOCUMENT TYPE: Patents; Patent
RECORD TYPE: ABSTRACT
PATENT NO: EP 0 553 063
PRIORITY APPLICATION: 28 July 1993 Priority application: Italy, FI920007, 16 January 1992
LANGUAGES: ENGLISH

The yarn is a natural or synthetic fibre yarn containing a carbon fibre yarn in a ***percentage*** by ***weight*** of not less than 1%. IPC D02G D04B H05K.

DESCRIPTORS: FABRICS-- KNITTED-- ELECTROMAGNETIC-WAVE-***REFLECTING***; NATURAL/CARBON ***FIBRE*** ***YARNS***; CARBON/SYNTHETIC FIBRE

YARNS; ***ELECTROMAGNETIC*** ***SHIELDING***

84/7,DE/12 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01523404 20010701982
Microstructure of a rapidly solidified Ti(ind 75)Ni(ind 25) alloy by ***melt***-***spinning*** process
Radojevic, BB
Center for Multidisciplinary Studies Belgrade Univ., Belgrade, YU
Materials Science and Engineering, Part A (Structural Materials: Properties, Microstructure and Processing), v304-306, n1-2, pp385-388, 2001
Document type: journal article Language: English
Record type: Abstract
ISSN: 0921-5093

ABSTRACT:
A metastable crystalline Ti(ind 75)Ni(ind 25) alloy in ribbon form is obtained by rapid solidification process. With the control of ***melt***-***spinning*** parameters different microstructures are formed, pointing to complex solidification effects in samples. The microstructural evolution as a function of cooling rate is explored using transmission electron microscopy. Temperatures of phase transitions are determined by different DSC analyses. X-ray diffraction patterns from the 'disc side' and 'air side' of the ribbon are analyzed to determine the difference in the phase composition. The correlation between cooling rates and the nature of solidification through the ***ribbon*** thickness as ***reflected*** in various microstructures is explained. (C) 2001 Elsevier Science B.V. All rights reserved.

DESCRIPTORS: RAPID SOLIDIFICATION; ***MELT*** ***SPINNING***--***METALS***; CRYSTAL MICROSTRUCTURE; TEM--TRANSMISSION ELECTRON MICROSCOPY; MINERALOGICAL COMPOSITION; X RAY ANALYSIS; CRYSTALLOGRAPHY; DIFFERENTIAL SCANNING CALORIMETRY; TITANIUM ALLOYS

84/7,DE/13 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

15151430 PASCAL Number: 01-0314751
Microstructure of a rapidly solidified Ti SUB 7 SUB 5 Ni SUB 2 SUB 5 alloy by ***melt***-***spinning*** process
RQ10, Tenth International Conference on Rapidly Quenched and Metastable Materials, 23-27 August 1999, Bangalore, India
RADOJEVIC Biljana B
CHATTOPADHYAY K, ed; RANGANATHAN S, ed
Center for Multidisciplinary Studies of Belgrade University, Kneza Viseslava I, Belgrade, Yugoslavia
RQ10 International Conference on Rapidly Quenched and Metastable Materials, 10 (Bangalore IND) 1999-08-23
Journal: Materials science & engineering. A, Structural materials : properties, microstructure and processing, 2001, 304-06 385-388
ISSN: 0921-5093 Availability: INIST-12899A; 354000098173890670
Number of Refs.: 20 reference
Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)
Country of Publication: Switzerland
Language: English
A metastable crystalline Ti SUB 7 SUB 5 Ni SUB 2 SUB 5 alloy in ribbon form is obtained by rapid solidification process. With the control of ***melt***-***spinning*** parameters different microstructures are formed, pointing to complex solidification effects in samples. The microstructural evolution as a function of cooling rate is explored using transmission electron microscopy. Temperatures of phase transitions are determined by

different DSC analyses. X-ray diffraction patterns from the "disc side" and "air side" of the ribbon are analyzed to determine the difference in the phase composition. The correlation between cooling rates and the nature of solidification through the ***ribbon*** thickness as ***reflected*** in various microstructures is explained.

English Descriptors: Rapid solidification; Microstructure; ***Melt*** ***spinning***; Metastable phases; Phase transformations; Cooling rate; TEM; Solidification rate; DSC; XRD; Activation energy; Titanium base alloys; Nickel alloys; Binary alloys; Experimental study

French Descriptors: Solidification rapide; Microstructure; Filage etat liquide; Phase metastable; Transformation phase; Vitesse refroidissement; TEM; Vitesse solidification; DSC; Diffraction RX; Energie activation; Alliage base titane; Nickel alliage; Alliage binaire; Etude experimentale ; 8130F; Alliage TiNi; Ni Ti

Spanish Descriptors: Velocidad solidificacion

84/7,DE/14 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

11634814 PASCAL Number: 94-0486273
Fibre optic ***reflectance*** sensor for the determination of aluminium(III) in aqueous environment
New methods and strategies environmental analysis : papers by young analytical chemists
MUSA AHMAD; RAMAIER NARAYANASWAMY
SMYTH Malcolm R, ed
UMIST, dep. instrumentation analytical sci., Manchester M60 1QD, United Kingdom
Dublin City university, Ireland
Euroanalysis, 8 (Edinburgh GBR) 1993-09-05
Journal: Analytica chimica acta, 1994, 291 (3) 255-260
ISSN: 0003-2670 CODEN: ACACAM Availability: INIST-3950; 354000046380120040
Number of Refs.: 8 reference
Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)
Country of Publication: Netherlands
Language: English
An optical Al(III) sensor based on the use of Eriochrome cyanine R (ECR) immobilised on XAD-2 (styrene-divinylbenzene cross-linked ***copolymer***) and diffuse reflectance spectrophotometry has been developed. A kinetic approach was used to quantify sensor response to Al(III) concentration in which the reflectance signal is measured at a fixed time interval of 3 min. Reproducible measurement of Al(III) was possible using the same probe (R.S.D.=1.8%). Linear response was obtained for Al(III) concentration 1.0x10 SUP - SUP 5 -4.0x10 SUP - SUP 4 M with limit of detection of 1.0x10 SUP - SUP 5 M of the ***metal*** ion. The sensor was also used for the determination of Al(III) in aqueous samples and the results obtained were comparable to those obtained by graphite furnace atomic absorption spectrometry

English Descriptors: Chemical analysis; Measurement sensor; Optical fiber; Atomic absorption spectrometry; Spectrophotometry; Diffuse ***reflection***; ***Aluminium***-ANA; Interelement effect

French Descriptors: Analyse chimique; Capteur mesure; Fibre optique; Spectrometrie absorption atomique; Spectrophotometrie; Reflexion diffuse; Aluminium-ANA; Effet interelement

Spanish Descriptors: Analisis quimico; Captador medida; Fibra optica; Espectrometria absorcion atomica; Espectrofotometria; Reflexion difusa;

Aluminio-ANA; Efecto interelemento
Other Descriptors: Chemische Analyse; Messwertaufnehmer; Faseroptik; Atomabsorptionsspektrometrie; Aluminium-ANA

84/7,DE/15 (Item 3 from file: 144)
DIALOG(R)File 144:Pascal

08794546 PASCAL Number: 89-0343847
Factors affecting the production of hydrogen sulphide by Lactobacillus sake ***L13*** growing on ***vacuum***-packaged beef
(Facteurs influant sur la production de sulfure d'hydrogene par Lactobacillus sake L13 cultive sur de la viande de boeuf conditionnee sous vide)
EGAN A F; SHAY B J; ROGERS P J
CSIRO div. food res., meat res. laboratory, Queensland, Australia
Journal: Journal of applied Bacteriology, 1989, 67 (3) 255-262
ISSN: 0021-8847 CODEN: JABAA4 Availability: CNRS-7415
Number of Refs.: 25 reference
Project Number: 2 tabl.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: United Kingdom
Note: 1 fig.
Language: English
Effet de la permeabilite a l'oxygene du film d'emballage, du pH et de la teneur en glucose de la viande sur la production d'H2S par Lactobacillus sake et sur la formation de sulfomyoglobine. L'alteration de la viande par L. sake est d'autant plus rapide que le pH est eleve (les viandes a pH eleve renferment moins de glucose). La formation de sulfomyoglobine et le verdissement peuvent etre evites en utilisant des films d'emballage de faible permeabilite a l'O2

English Descriptors: Conditioning; Vacuum; Packaging; Plastics; Alteration; Biological contamination; Color; Flavor

French Descriptors: Conditionnement; Vide; Emballage; Matiere plastique; Alteration; Contamination biologique; Couleur; Flaveur; Lactobacillus sake

Spanish Descriptors: Acondicionamiento; Vacio; Empaque; Material plastico; Alteracion; Contaminacion biologica; Color; Flavor

84/7,DE/16 (Item 1 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics

00420352
TITLE: ROLE OF INTERPHASE ON ADHESION OF COATINGS AND COMPOSITES
AUTHOR(S): Ishida H
Editor(s): Clearfield H M
CORPORATE SOURCE: CASE WESTERN RESERVE UNIVERSITY
CONFERENCE PROCEEDINGS: Fourteenth Annual Meeting of the Adhesion Society. Meeting Proceedings
CORPORATE EDITOR: Adhesion Society Inc.
SOURCE: Clearwater, Fl., 17th-20th Feb.1991, p.106-10. 9(12)4
JOURNAL ANNOUNCEMENT: 199107 RAPRA UPDATE: 199111
DOCUMENT TYPE: Conference Papers
LANGUAGE: English
SUBFILE: (R) RAPRA; (A) Adhesives
ABSTRACT: Various coating systems on ***metallic*** substrates were investigated to illustrate the uniqueness of each system as well as their common features. The systems include epoxy coatings on steel and copper, a polyimide coating on copper, modified PE ***coatings*** on ***aluminium***, and an epoxy coating on a carbon ***fibre***. Fourier

transform IR ***reflection*** spectroscopy was discussed as a characterisation technique. 20 refs.
DESCRIPTORS: ADHESION; CHARACTERISATION; COATING; COMPANIES; COMPANY; DATA; EPOXY ***RESIN***; ETHYLENE ***POLYMER***; FOURIER TRANSFORM; GRAPH; INTERFACIAL ADHESION; IR SPECTROSCOPY; PE; PLASTIC; POLYIMIDE; TECHNICAL; THERMOPLASTIC; THERMOSET; CHARACTERIZATION

84/7,DE/17 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

06593029
SPINNERET FOR PRODUCING CONJUGATE ***FIBER*** EXHIBITING OPTICAL ***REFLECTANCE*** AND INTERFERENCE

PUB. NO.: 2000-178825 [JP 2000178825 A]
PUBLISHED: June 27, 2000 (20000627)
INVENTOR(s): KUMAZAWA KINYA
TABATA HIROSHI
ASANO MARI
KURODA TOSHIMASA
SHIMIZU SUSUMU
SAKIHARA AKIO
APPLICANT(s): NISSAN MOTOR CO LTD
TEIJIN LTD
TANAKA KIKINZOKU KOGYO KK
APPL. NO.: 10-375483 [JP 98375483]
FILED: December 16, 1998 (19981216)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a ***spinneret*** having increased space utility factor and new structure and capable of efficiently and precisely producing a conjugate fiber having laminar cross-section structure, developing luxury color by the reflection and interference of visible rays and exhibiting excellent designability.

SOLUTION: Small holes for extruding a ***polymer*** material having low ***refractive*** ***index*** and arranged in a ring form are placed opposite to small holes for extruding a ***polymer*** material having high ***refractive*** ***index*** and arranged in a ring form in a state not to direct the extruding sides of both small holes opposite to each other. Both ***polymer*** materials are introduced through the distribution holes for both materials into a laminate-forming groove 26 having annular cross-section. The formed laminated ***polymer*** material layer is passed through a tapered thin-layer forming groove 27 having a passing area gradually narrowing with an inclined wall to gradually decrease the thickness of the laminate and finally extruded through an extrusion opening to obtain the objective conjugate ***fiber*** having optical ***reflectance*** and interference.

84/7,DE/18 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

06323306
REFLECTION MIRROR MADE OF ***FIBER*** REINFORCED PLASTIC AND ITS PRODUCTION

PUB. NO.: 11-264906 [JP 11264906 A]
PUBLISHED: September 28, 1999 (19990928)
INVENTOR(s): WADA HIROHIDE

NISHI YASUHIRO
ITO TOSHIHIRO
APPLICANT(s): TORAY IND INC
APPL. NO.: 10-066724 [JP 9866724]
FILED: March 17, 1998 (19980317)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a ***reflection*** mirror made of ***fiber*** reinforced plastic having a reflectivity of high accuracy by successively laminating a ***metallic*** plate and a sheet material consisting of a ***resin*** via adhesives on at least one surface of a base material made of the fiber reinforced plastic.
SOLUTION: This reflection mirror is constituted by successively laminating the ***metallic*** plate and the sheet material consisting of the ***resin*** via the adhesives on at least one surface of the base material 1 made of the fiber reinforced plastic. In such a case, the reflection surface layer 2 consists of ***metals*** , such as aluminum, chromium, nickel and silver, having the high reflectivity. More particularly the aluminum having the highest reflectivity is preferable. Such ***metals*** are generally deposited by evaporation on the sheet consisting of the ***resin*** . A foam, such as methacrylimide foam, may be arranged in the central part of the laminated layers. While the ***metallic*** plate is used to conceal the surface roughness of the fiber reinforced plastic ***layer***, lightweight ***aluminum*** is preferable as the ***metal*** kind to be used and iron and stainless steel or the like are equally well.

84/7,DE/19 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

05382451
STRING-LIKE MATERIAL

PUB. NO.: 08-337951 [JP 8337951 A]
PUBLISHED: December 24, 1996 (19961224)
INVENTOR(s): MIURA KATSUYA
APPLICANT(s): REIKO CO LTD [351035] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-171395 [JP 95171395]
FILED: June 13, 1995 (19950613)
JAPIO CLASS: 15.2 (FIBERS -- Cloth Products); 11.3 (AGRICULTURE -- Livestock); 15.1 (FIBERS -- Yarns & Ropes)

ABSTRACT

PURPOSE: To obtain a rope readily visible regardless of an incidence direction of light rays in use at night and a watching angle, by using a part of returning ***reflection*** ***yarn*** to form a string-like material.

CONSTITUTION: One side or both sides of a polyester film having 25μm thickness are provided with an ***aluminum*** deposited ***layer***. Plastic or ***glass*** ***beads*** are scattered and fixed through a polyester-based ***resin*** binder to the one side or the both sides of the film to form a bead layer. In case the one side is treated, two sheets of the polyester films are laminated so as to lay the polyester films inside and the laminate is thinly cut to give returning ***reflection*** ***yarn*** . Woven and knitted fabric or a thin linear material such as a braid, a twisted material, etc., using yarn, tape, ***metal*** yarn, ***metal*** wire, etc., such as polypropylene yarn is combined with the returning ***reflection*** ***yarn*** to form the objective string-like material.

84/7,DE/20 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

03534138
PREPARATION OF COLORED CARBON FIBER REINFORCED PLASTIC

PUB. NO.: 03-197038 [JP 3197038 A]
PUBLISHED: August 28, 1991 (19910828)
INVENTOR(s): GOTO TAKESHI
YOKOCHI TADASHI
APPLICANT(s): MITSUBISHI RAYON CO LTD [000603] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-336896 [JP 89336896]
FILED: December 26, 1989 (19891226)
JAPIO CLASS: 14.2 (ORGANIC CHEMISTRY -- High ***Polymer*** Molecular Compounds)
JAPIO KEYWORD:R040 (CHEMISTRY -- Reinforced Plastics); R052 (FIBERS -- Carbon Fibers); R057 (FIBERS -- Non-woven Fabrics); R124 (CHEMISTRY -- Epoxy ***Resins***)

ABSTRACT

PURPOSE: To obtain a deeply colored carbon ***fiber*** reinforced plastic with ***reflective*** and absorptive effects by forming a thin ***metal*** film on the surface of a fabric containing carbon fiber yarns and performing ***resin*** impregnation.

CONSTITUTION: After a thin ***metal*** film is formed on the surface of a fabric containing carbon fiber yarns, the fabric is impregnated with a ***resin*** to prepare a colored carbon fiber reinforced plastic. After an ***aluminum*** thin ***film*** with a thickness of 0.04μm is formed on the surface of a laminate (the surface of a CF cloth) by means of a ***vacuum*** deposition method, the cloth is impregnated with an epoxy ***resin*** existing in the laminate by means of a flat belt press at 80 deg.C. As ***resin*** impregnation proceeds, the epoxy ***resin*** breaks the ***aluminum*** thin ***film*** and spreads out to the surface of the CF cloth and a complete impregnation is performed. A CF cloth prepreg thus obtained is molded at 130 deg.C for 1hr to obtain a molded sheet with no luster and being apparently white. This molded sheet is colored with a transparent coloring paint with an arbitrary color.

84/7,DE/21 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO

02041739
PREPARATION OF ***REFLECTIVE*** MIRROR MADE OF ***FIBER*** REINFORCED PLASTIC

PUB. NO.: 61-255839 [JP 61255839 A]
PUBLISHED: November 13, 1986 (19861113)
INVENTOR(s): SHIMODAIRA HISAYO
ONO TOSHIO
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-098636 [JP 8598636]
FILED: May 09, 1985 (19850509)
JAPIO CLASS: 14.2 (ORGANIC CHEMISTRY -- High ***Polymer*** Molecular Compounds)
JAPIO KEYWORD:R040 (CHEMISTRY -- Reinforced Plastics); R052 (FIBERS -- Carbon Fibers)

ABSTRACT

PURPOSE: To make it possible to easily release a sandwich structure and to

improve the close adhesiveness of aluminum, by a method wherein the plating processing of a non-ferrous ***metal*** inferior to close adhesiveness is applied to the surface of a mold having received mirror surface finishing and comprising a material low in liner expansion coefficient and a fiber reinforced plastic (FRP) plate of a semi-cured state is placed on the plating layer to mold a reflective mirror base material under heating and pressure while a mirror surface is transferred to said base material and a non-ferrous ***metal*** is adhered thereto before a ***metal*** having high reflectivity is vapor-deposited to said non-ferrous ***metal*** layer.

CONSTITUTION: A hard non-ferrous ***metal*** layer 11 inferior to close adhesiveness to a mold is plated to the upper surface of a mold frame 10 having received mirror surface processing. A FRP plate 3, a central member 2 and the FRP plate 3 are laminated to the surface of the plating layer in this order through film like adhesive layers 4 and, when the whole is molded under heating and pressure, a mirror surface is transferred to the FRP plate 3 contacted with the mold 10 through the non-ferrous ***metal*** layer 11 and the non-ferrous ***metal*** layer 11 is adhered to said surface apart from the mold 10. A ***metal*** 12 having high ***reflectivity*** such as ***aluminum*** is vapor-deposited to the FRP plate 3 constituting a sandwich structure 1 having received mirror surface finishing to prepare a reflective mirror wherein the mirror surface finishing of the FRP plate 3 after molding became unnecessary and a working time is shortened.

84/7,DE/22 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO

02041738
PREPARATION OF ***REFLECTIVE*** MIRROR MADE OF ***FIBER*** REINFORCED PLASTIC

PUB. NO.: 61-255838 [JP 61255838 A]
PUBLISHED: November 13, 1986 (19861113)
INVENTOR(s): SHIMODAIRA HISAYO
ONO TOSHIO
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-098635 [JP 8598635]
FILED: May 09, 1985 (19850509)
JAPIO CLASS: 14.2 (ORGANIC CHEMISTRY -- High ***Polymer*** Molecular Compounds)
JAPIO KEYWORD: R040 (CHEMISTRY -- Reinforced Plastics); R052 (FIBERS -- Carbon Fibers)

ABSTRACT

PURPOSE: To obtain a method for preparing a reflective mirror capable of easily releasing a sandwich structure even if no release agent is used and improved in the close adhesiveness of an ***aluminum*** vapor deposition ***film*** , by a method wherein a release film is placed on the upper surface of a mold having a molding surface having received mirror surface finishing and comprising a material having low linear expansion coefficient and, after a ***resin*** layer was formed on said film, a fiber reinforced plastic plate of a semi-cured state is further placed on said ***resin*** layer to mold a reflective mirror base material under pressure and heating and, after demolding, a thin ***metal*** film is vapor-deposited to the ***resin*** layer.

CONSTITUTION: A release film 8 is placed on the upper surface having received mirror surface processing of a mold 10 and a ***resin*** layer 9 is subsequently formed to said film 8 and a FRP plate 3, an adhesive 4, a central member 2, the adhesive 4 and the FRP plate 3 are successively laminated to said ***resin*** layer 9 and the whole is pressurized under heating to mold the base material of a reflective mirror. When demolding is

performed after the completion of molding, a mirror surface is transferred to the adhered ***resin*** layer 9 and, therefore, only by applying the vapor deposition of aluminium 5 to the ***resin*** layer 9, the reflective surface of a reflective mirror is formed and the obtained structure is mounted to a mount frame to complete the reflective mirror. Further, if the polishing processing of the ***resin*** layer 9 is performed to reduce surface roughness and aluminum 5 is subsequently vapor- deposited, the reflective mirror having higher accuracy is obtained.

84/7,DE/23 (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO

02023901
FIBER-REINFORCED PLASTIC ***REFLECTING*** MIRROR

PUB. NO.: 61-238001 [JP 61238001 A]
PUBLISHED: October 23, 1986 (19861023)
INVENTOR(s): SHIMODAIRA HISAYO
ONO TOSHIO
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-079516 [JP 8579516]
FILED: April 15, 1985 (19850415)
JAPIO CLASS: 29.2 (PRECISION INSTRUMENTS -- Optical Equipment); 14.2 (ORGANIC CHEMISTRY -- High ***Polymer*** Molecular Compounds)
JAPIO KEYWORD:R020 (***VACUUM*** TECHNIQUES); R040 (CHEMISTRY -- Reinforced Plastics); R052 (FIBERS -- Carbon Fibers

ABSTRACT

PURPOSE: To obtain the titled mirror having light in weight, high rigidity and thermal dimensional stability by forming reflecting mirror on the surface of a fiber-reinforced plastic plate.
CONSTITUTION: A carrier 1 is made of for example, a ***metal*** frame. The supporting body 2 of a reflecting mirror is made of for example, a FRP beam. The FRP plate 7 which is the substrate of the reflecting mirror is composed of a carbon fiber reinforced plastic plate and is formed to a recessed shape. The reflecting film 5 is an ***aluminium*** ***film*** vapor-deposited on the surface of the FRP plate 7. By constituting as mentioned above, the FRP plate 7 made of the carbon fiber reinforced plastic which is the substrate, has small specific gravity and has high specific rigidity, thereby being light in weight and obtaining the reflecting mirror having the high rigidity. As the FRP plate 7 has the small coefficient of linear expansion, dimensional stability against temperature change is maintained and resulted in the reflecting mirror with the high accuracy. Further, as the titled mirror has good radiating characteristics, the temperature raise of the reflecting mirror becomes small and the titled mirror can be used with the good stability under a high ***vacuum*** condition as well.

84/7,DE/24 (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO

01169432
DRY ETCHING DEVICE

PUB. NO.: 58-106832 [JP 58106832 A]
PUBLISHED: June 25, 1983 (19830625)
INVENTOR(s): FUJIMOTO HARUHIKO
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 56-203746 [JP 81203746]
FILED: December 18, 1981 (19811218)

JAPIO CLASS: 42.2 (ELECTRONICS -- Solid State Components)
JAPIO KEYWORD:R004 (PLASMA); R044 (CHEMISTRY -- Photosensitive ***Resins***
)

ABSTRACT
PURPOSE: To accurately and securely detect the etching finishing point of a material to be processed with small etching area, by providing a light reflection film on the external wall surface except for the monitor window of a quartz chamber.

CONSTITUTION: In a plasma etching, the inside of the quartz chamber 1 is maintained at a fixed ***vacuum*** degree, and then a desired processing gas is supplied in a desired amount. A stage 3 is heated to a desired temperature, then a desired high frequency power is impressed between a pair of parallel electrodes, and accordingly plasma formation is contrived resulting in the etching of the film of the water 2 surface. On the outer peripheral wall of the quartz chamber 11, an ***Al*** ***film*** is formed by evaporation as the reflection film 19 on the region except for the monitor window 18. A condensing lens 20 is positioned at the monitor window 18 and transmits a light intensity of radical F* in the quartz chamber 1 into a detector 22 out of the high frequency field via an optical ***fiber*** 21. Since the ***reflection*** film 19 is formed on the external wall surface of the quartz chamberf 1, the light of radical F* does not leak out of the quartz chamber 1. Therefore, fine variation of light intensity can be detected.

84/7,DE/25 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

142157674 CA: 142(9)157674w PATENT
Recurrent reflection filament and manufacture method thereof
INVENTOR(AUTHOR): Kong, Yung Du
LOCATION: S. Korea
ASSIGNEE: Texland Co., Ltd.
PATENT: Repub. Korean Kongkae Taeho ; KR 20010014677 A DATE: 20010226
APPLICATION: KR 16995 (20000331) *KR 9921810 (19990611)
PAGES: No pp. given CODEN: KRXXA7 LANGUAGE: Korean CLASS: D01F-009/08A
SECTION:
CA240002 TEXTILES AND FIBERS
IDENTIFIERS: nylon polyester polypropylene conjugated spinning recurrent reflection filament
DESCRIPTORS:
Filaments... Glass beads... Mixing... Pigments,nonbiological... Yarns...
manufacture of recurrent reflection filament by conjugated spinning
Polyamide fibers,uses... Polyester fibers,uses... Polypropene fibers,uses ...
spinning; manufacture of recurrent reflection filament by conjugated spinning
CAS REGISTRY NUMBERS:
25085-53-4 fiber; manufacture of recurrent reflection filament by conjugated spinning

84/7,DE/26 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

141262028 CA: 141(16)262028r PATENT
Recurrent reflective synthetic filament yarn and its production
INVENTOR(AUTHOR): Kang, Kyung-Joong
LOCATION: S. Korea
PATENT: U.S. Pat. Appl. Publ. ; US 20040180199 A1 DATE: 20040916
APPLICATION: US 808873 (20040318) *US 150697 (20020517)
PAGES: 16 pp., Cont.-in-part of U.S. Pat. Appl. 2003 215,631. CODEN:

USXXCO LANGUAGE: English CLASS: 428364000; D02G-003/00A
SECTION:
CA240002 TEXTILES AND FIBERS
IDENTIFIERS: reflective synthetic yarn fabrication metalized glass bead
DESCRIPTORS:
Glass beads...
metalized; recurrent reflective synthetic filament yarn with aluminized glass beads
Yarns...
omnidirectional reflective; recurrent reflective synthetic filament yarn with aluminized glass beads
Polyester fibers,uses... Polyamide fibers,uses... Polyesters,uses...
Polypropene fibers,uses...
recurrent reflective synthetic filament yarn with aluminized glass beads
CAS REGISTRY NUMBERS:
25085-53-4 fiber; recurrent reflective synthetic filament yarn with aluminized glass beads
25038-59-9 uses, fiber; recurrent reflective synthetic filament yarn with aluminized glass beads
7429-90-5 uses, recurrent reflective synthetic filament yarn with aluminized glass beads
7440-02-0 7440-22-4 uses, recurrent reflective synthetic filament yarn with metalized glass beads

84/7,DE/27 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

136119507 CA: 136(8)119507n PATENT
Recursive reflective material with good antisoiling property
INVENTOR(AUTHOR): Matsuura, Hiroaki
LOCATION: Japan,
ASSIGNEE: Komatsu Process K. K.
PATENT: Japan Kokai Tokkyo Koho ; JP 200222916 A2 DATE: 20020123
APPLICATION: JP 2000199990 (20000630)
PAGES: 9 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: G02B-005/128A; B32B-027/00B; B41M-003/06B; E01F-009/00B; G09F-013/16B
SECTION:
CA238003 Plastics Fabrication and Uses
IDENTIFIERS: antisoiling recursive reflective material, glass bead reflective material, polyester fiber laminate reflective material
DESCRIPTORS:
Polyesters,uses...
films, transparent; recursive reflective material with good antisoiling property
Glass beads... Mica-group minerals,uses... Polyester fibers,uses...
recursive reflective material with good antisoiling property
Films...
reflective; recursive reflective material with good antisoiling property
CAS REGISTRY NUMBERS:
7429-90-5 uses, colored; recursive reflective material with good antisoiling property

84/7,DE/28 (Item 4 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

133166885 CA: 133(12)166885g JOURNAL
Temperature-dependent reflectance of plated metals and composite materials under laser irradiation
AUTHOR(S): Freeman, Robert K.; Rigby, Fred A.; Morley, Nicholas
LOCATION: Science Applications International Corporation, Albuquerque, NM

, 87111, USA
JOURNAL: J. Thermophys. Heat Transfer DATE: 2000 VOLUME: 14 NUMBER: 3
PAGES: 305-312 CODEN: JTHTEO ISSN: 0887-8722 LANGUAGE: English
PUBLISHER: American Institute of Aeronautics and Astronautics
SECTION:
CA256006 Nonferrous Metals and Alloys
IDENTIFIERS: laser irradn surface reflectance temp dependence, stainless steel polishing coating reflectance, nickel electroplate laser reflectance temp dependence, zinc electroplate laser reflectance temp dependence, chromium electroplate laser reflectance temp dependence, epoxy glass fiber composite laser reflectance, aluminum alloy laser reflectance temp dependence
DESCRIPTORS:
Glass fibers,processes...
composites; temperature-dependent reflectance of plated metals and composite materials under laser irradiation
Epoxy resins,processes...
glass fiber composites; temperature-dependent reflectance of plated metals and composite materials under laser irradiation
Electrodeposits... Fiber-reinforced composites... Optical reflection...
temperature-dependent reflectance of plated metals and composite materials under laser irradiation
CAS REGISTRY NUMBERS:
12597-68-1 processes, temperature-dependent reflectance of plated metals and composite materials under laser irradiation
7440-02-0 7440-47-3 7440-66-6 properties, electroplate; temperature-dependent reflectance of plated metals and composite materials under laser irradiation
12616-75-0 12616-84-1 12627-49-5 temperature-dependent reflectance of plated metals and composite materials under laser irradiation

84/7,DE/29 (Item 5 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

128208011 CA: 128(17)208011y PATENT
Coated optical fibers for use in spectroscopy
INVENTOR(AUTHOR): Alcock, Ian Peter
LOCATION: UK,
ASSIGNEE: Perkin-Elmer Limited
PATENT: Britain UK Pat. Appl. ; GB 2313330 A1 DATE: 19971126
APPLICATION: GB 9610901 (19960524)
PAGES: 5 pp. CODEN: BAXXDU LANGUAGE: English CLASS: C03C-025/02A; G02B-006/02
SECTION:
CA257001 Ceramics
IDENTIFIERS: spectroscopy optical fiber coating, IR reflective coating optical fiber, metal coating optical fiber, aluminum coating optical fiber, gold coating optical fiber, copper coating optical fiber, carbon coating optical fiber, fluoropolymer coating optical fiber
DESCRIPTORS:
Optical fibers...
in spectroscopy; IR-reflective coating for
Spectroscopy...
IR-reflective coating for optical fibers for use in
Metals,uses...
IR-reflective coating; for optical fibers for use in spectroscopy
Coatings...
IR-reflective; for optical fibers for use in spectroscopy
Fluoropolymers,uses...
IR-resistant coating of; on optical fibers for use in spectroscopy
CAS REGISTRY NUMBERS:
7429-90-5 7440-50-8 7440-57-5 uses, IR-reflective coating; for optical fibers for use in spectroscopy
7440-44-0 uses, IR-resistant coating of; on optical fibers for use in

spectroscopy

84/7,DE/30 (Item 6 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

127221924 CA: 127(16)221924x PATENT
Manufacture of reflective fabrics with good laundering durability
INVENTOR(AUTHOR): Kamemaru, Kenichi; Nakagawa, Kiyoshi
LOCATION: Japan,
ASSIGNEE: Unitika Ltd.
PATENT: Japan Kokai Tokkyo Koho ; JP 97211212 A2 ; JP 09211212 DATE: 19970815
APPLICATION: JP 9613586 (19960130)
PAGES: 5 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: G02B-005/128A; B32B-007/02B; D06N-003/00B
SECTION:
CA240010 TEXTILES AND FIBERS
IDENTIFIERS: reflective polyester fabric polyurethane adhesive aluminum, glass bead reflective silver polyester fabric
DESCRIPTORS:
Glass beads...
HI 53-88S; manufacture of reflective fabrics with good laundering durability and soft handle by forming polyurethane adhesive layers containing reflective metals and glass beads
Adhesives... Polyester fabrics... Polyester fibers,uses...
Polyurethanes,uses...
manufacture of reflective fabrics with good laundering durability and soft handle by forming polyurethane adhesive layers containing reflective metals and glass beads
CAS REGISTRY NUMBERS:
194655-97-5P manufacture of reflective fabrics with good laundering durability and soft handle by forming polyurethane adhesive layers containing reflective metals and glass beads
7440-22-4 uses, manufacture of reflective fabrics with good laundering durability and soft handle by forming polyurethane adhesive layers containing reflective metals and glass beads
7429-90-5 uses, Sap 5501EA; manufacture of reflective fabrics with good laundering durability and soft handle by forming polyurethane adhesive layers containing reflective metals and glass beads

84/7,DE/31 (Item 7 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

127067302 CA: 127(5)67302j PATENT
Reflective fabrics with good washfastness and softness and their manufacture
INVENTOR(AUTHOR): Kamemaru, Kenichi; Nakagawa, Kiyoshi
LOCATION: Japan,
ASSIGNEE: Unitika Ltd.
PATENT: Japan Kokai Tokkyo Koho ; JP 97119079 A2 ; JP 09119079 DATE: 19970506
APPLICATION: JP 95273995 (19951023)
PAGES: 5 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: D06Q-001/10A; D06M-017/00B; D06N-003/00B
SECTION:
CA240005 TEXTILES AND FIBERS
CA242XXX Coatings, Inks, and Related Products
IDENTIFIERS: reflective fabric glass bead coated, aluminum coated reflective fabric, washfastness reflective fabric, polyester fabric reflective glass bead coated, sportswear reflective fabric, safety clothing reflective fabric
DESCRIPTORS:

Safety devices...
clothing (no data); reflective fabrics with good washfastness and softness and their manufacture for
Plastic films...
laminated, laminates of polyethylene films with heat-resistant films, release materials; reflective fabrics with good washfastness and softness and their manufacture
Polyesters,uses...
laminates with polyethylene films, release materials; reflective fabrics with good washfastness and softness and their manufacture
Metals,uses...
light-reflective, coatings; reflective fabrics with good washfastness and softness and their manufacture
Adhesives...
polyisocyanates; reflective fabrics with good washfastness and softness and their manufacture
Glass beads...
reflective coatings, HI 53-105S; reflective fabrics with good washfastness and softness and their manufacture
Fabrics... Polyester fabrics... Polyester fibers,uses...
reflective fabrics with good washfastness and softness and their manufacture
Coatings...
reflective, glass beads and metals; reflective fabrics with good washfastness and softness and their manufacture
Clothing...
sportswear, (no data); reflective fabrics with good washfastness and softness and their manufacture for
CAS REGISTRY NUMBERS:
166516-05-8 adhesive; reflective fabrics with good washfastness and softness and their manufacture
9002-88-4 laminates with PET films, release materials; reflective fabrics with good washfastness and softness and their manufacture
7429-90-5 uses, coating; reflective fabrics with good washfastness and softness and their manufacture
25038-59-9 uses, laminates with polyethylene films, release materials; reflective fabrics with good washfastness and softness and their manufacture

84/7,DE/32 (Item 8 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

124345989 CA: 124(26)345989e PATENT
Heat-reflective textile composites
INVENTOR(AUTHOR): Morey, Jason; Heward, Christopher Michael
LOCATION: UK,
ASSIGNEE: Tygaflor Limited
PATENT: PCT International ; WO 9605360 A1 DATE: 960222
APPLICATION: WO 95GB1875 (950809) *GB 9416076 (940809)
PAGES: 15 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: D06N-003/00A; D06N-003/04B; B32B-027/12B; B32B-027/20B DESIGNATED COUNTRIES: AM; AT; AU; BB; BG; BR; BY; CA; CH; CN; CZ; DE; DK; EE; ES; FI; GB; GE; HU; IS; JP; KE; KG; KP; KR; KZ; LK; LR; LT; LU; LV; MD; MG; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; TJ; TM; TT DESIGNATED REGIONAL: KE; MW; SD; SZ; UG ; AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG
SECTION:
CA240010 TEXTILES AND FIBERS
CA242XXX Coatings, Inks, and Related Products
IDENTIFIERS: heat reflector textile composite, glass fabric composite reflector, PTFE coating heat reflector, aluminum flake coating heat reflector
DESCRIPTORS:
Fluoropolymers...
coatings; heat-reflective textile composites
Glass fibers,textiles,uses... Textiles... Thermal insulators...

heat-reflective textile composites
Belts,conveyor... Conveyors,belts...
heat-reflective textile composites for use in
Metals,uses...
particles; in heat-reflective textile composites
CAS REGISTRY NUMBERS:
9002-84-0 coatings; heat-reflective textile composites
7429-90-5 uses, flakes; in heat-reflective textile composites

84/7,DE/33 (Item 9 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

89112146 CA: 89(14)112146w PATENT
Reflective coatings
LOCATION: USA
ASSIGNEE: Minnesota Mining and Mfg. Co.
PATENT: Japan Kokai Tokkyo Koho JP 7817643 DATE: 780217
APPLICATION: United States US 711140 DATE: 760803
PAGES: 8 pp. CODEN: JKXXAF CLASS: C09D-005/00;
SECTION:
CA039006 Textiles
IDENTIFIERS: glass bead reflective coating, aluminum coated glass bead,
polyester coating reflective fabric
DESCRIPTORS:
Glass,oxide, beads...
aluminum-coated, reflective coatings containing, for fabrics
Synthetic fibers... Textiles...
polyester reflective coatings for, containing glass beads
Coating materials,reflective...
polyesters, containing aluminum-coated glass beads, for fabrics
CAS REGISTRY NUMBERS:
67297-39-6 coatings, reflective, containing aluminum-coated glass beads, for
textiles
11138-11-7 polyester reflective coatings containing aluminum-coated glass
beads and, magnetically orientatable, for fabrics
7429-90-5 uses and miscellaneous, glass beads coated with, polyester
reflective coatings containing, for fabrics

84/7,DE/34 (Item 10 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

87168974 CA: 87(22)168974r PATENT
Laminates with light reflectance properties
INVENTOR(AUTHOR): Takimoto, Kiyoshi
LOCATION: Japan
PATENT: Japan Kokai Tokkyo Koho JP 7788642 DATE: 770725
APPLICATION: Japan JP 763379 DATE: 760113
PAGES: 5 pp. CODEN: JKXXAF CLASS: D02G-003/34;
SECTION:
CA037003 Plastics Fabrication and Uses
IDENTIFIERS: aluminum fiber glass laminate, acrylic adhesive aluminum
glass laminate, pavement reflecting material
DESCRIPTORS:
Adhesives...
acrylic polymers, for laminating aluminum-coated fibers with glass
beads
Acrylic polymers,uses and miscellaneous...
adhesives, for laminating aluminum-coated fibers with glass beads
Fibers...
aluminum-coated, laminates with glass beads, for reflecting surface
Glass,oxide, beads...
laminates with aluminum-coated fibers, for reflecting surface

Pavements and Roads...
reflecting materials for, aluminum-coated fiber-glass bead laminates as
CAS REGISTRY NUMBERS:
7429-90-5 uses and miscellaneous, fibers coated by, laminates with glass base, for reflecting surface

84/7,DE/35 (Item 11 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

81026861 CA: 81(6)26861d PATENT
Light-transmissive retroreflective sheeting
INVENTOR(AUTHOR): Tung, Chi Fang
ASSIGNEE: Minnesota Mining and Manufacturing Co.
PATENT: United States US 3790431 DATE: 740205
APPLICATION: United States US 220152 DATE: 720124
PAGES: 5 pp. CODEN: USXXAM CLASS: 161/3.5; G 09f
SECTION:
CA937003 Plastics Fabrication and Uses
IDENTIFIERS: reflective screen sign, nylon reflective screen, glass microsphere reflective screen, aluminized glass microsphere
DESCRIPTORS:
Epoxy resins...
adhesives, for bonding of microspheres to reflective screens
Glass...
beads, aluminum-coated, in screens
Optical reflectors...
microsphere-coated screens, for use in signs
Signs...
reflective screens for use in
Polyamide fibers...
reflective screens, microsphere-coated
CAS REGISTRY NUMBERS:
27417-83-0 adhesives containing, for bonding of microspheres to reflective screens
25068-38-6 adhesives, for bonding of microspheres to reflective screens
7429-90-5 uses and miscellaneous, coatings, for glass microspheres in reflective screens
? t s84/34/36-67
>>>Format 34 is not valid in file 2
>>>Format 34 is not valid in file 6
>>>Format 34 is not valid in file 8
>>>Format 34 is not valid in file 31
>>>Format 34 is not valid in file 35
>>>Format 34 is not valid in file 36
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>>>Format 34 is not valid in file 65
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>>>Format 34 is not valid in file 94
>>>Format 34 is not valid in file 95
>>>Format 34 is not valid in file 103
>>>Format 34 is not valid in file 144
>>>Format 34 is not valid in file 315
>>>Format 34 is not valid in file 323
>>>Format 34 is not valid in file 347
>>>Format 34 is not valid in file 399

84/34/36 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016654504 **Image available**
WPI Acc No: 2004-813224/200480
Colorization pellet for use in plastic injection molding process for producing e.g. injection molded part, comprises ***reflective*** devices

attached to ***fibers*** and providing formed part with ***metallic*** appearance during injection molding process
Patent Assignee: DEBOER R M (DEBO-I); MACRAE R A (MACR-I); SHEPHERD S D (SHEP-I); GENERAL MOTORS CORP (GENK)
Inventor: DEBOER R M; MACRAE R A; SHEPHERD S D
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20040229037	A1	20041118	US 2003438771	A	20030515	200480	B
US 6884385	B2	20050426	US 2003438771	A	20030515	200528	

Priority Applications (No Type Date): US 2003438771 A 20030515
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040229037	A1		6	B32B-005/16	
US 6884385	B2			C04B-035/622	

Abstract (Basic): US 20040229037 A1

NOVELTY - A colorization pellet for use in a plastic injection molding process comprises a pellet body formed of a material having a predetermined color; fibers in the pellet body; and reflective devices attached to the fibers, where when colorization pellet is combined with a plastic molding compound during an injection molding process to form a part, the reflective devices provide the formed part with a ***metallic*** appearance.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method of producing colorization pellets for use in an injection molding process, comprising providing a filament; colorizing the ***filament***; attaching ***reflective*** devices to the ***filament***; separating the filament into ***fibers*** having attached ***reflective*** devices; adding a color concentrate material to a compounding extruder; adding the fibers to the compounding extruder; and operating the compounding extruder to mix the fibers with the color concentrate material, and form colorization pellets; and

(2) a method of producing a plastic component having a ***metallic*** appearance by injection molding, comprising providing colorization pellets to an injection molding extruder; providing a plastic molding material to the extruder; operating the extruder to mix the colored material, fibers, and plastic molding material together into a molding compound; and forming the molding compound into plastic components, each having a ***metallic*** appearance.

USE - The invention is for use in a plastic injection molding process for producing a plastic component having a ***metallic*** appearance (claimed). It is useful for an injection-molded part. It is used to form parts having medium and lighter color values for interior and exterior applications.

ADVANTAGE - The invention provides a ***metallic*** appearance in the exterior surface of an injection-molded part, without the need for subsequent painting after the part has been formed. The fiber's composition and visual size distribution promote a clean appearance that is free of the flow and knit line defects. The invention is a lower cost alternative to reflective or ***metallic*** paint coatings, paint films and ***polymer*** films.

DESCRIPTION OF DRAWING(S) - The figure is a flowchart for producing an injection-molded part, utilizing the colorization pellet.

pp; 6 DwgNo 3/3

Technology Focus:

TECHNOLOGY FOCUS - CERAMICS AND GLASS - Preferred Component: The ***reflective*** devices include ***aluminum*** particles, ***coated*** mica particles, reflective ***glass*** ***beads***, reflective ***glass*** flakes and/or holographic particles.

POLYMERS - Preferred Material: The fibers are formed from a polymeric inorganic material.

Preferred Component: The fibers have the predetermined color. They have a different predetermined color than the predetermined color of the material

Derwent Class: A32; P73; X25

International Patent Class (Main): B32B-005/16; C04B-035/622

84/34/37 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016636758 **Image available**
WPI Acc No: 2004-795471/200478
Yarn feeder includes optoelectronic yarn sensor with protective layer having light transparent amorphous ceramic material, at least at free surface of the protective layer contacted by yarn windings
Patent Assignee: IROPA AG (IROA)
Inventor: BROVARONE C; FIORIO M
Number of Countries: 108 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200494285	A1	20041104	WO 2004EP4229	A	20040421	200478	B

Priority Applications (No Type Date): SE 20031181 A 20030421
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200494285	A1	E	16	B65H-051/22	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200494285 A1
NOVELTY - Yarn feeder comprises an optoelectronic ***yarn*** sensor having a ***reflector*** surface (B) provided at a peripheral portion of a storage body (3) carrying ***yarn*** windings. The ***reflector*** surface is situated behind a light transparent protective layer (5), a free surface (13) of which is contacted by the yarn windings. The protective layer, at least at the free surface contacted by yarn windings, comprises light transparent amorphous ceramic material (C).
USE - Used as a yarn feeder for feeding and transporting yarn.
ADVANTAGE - The invention has unlimited operational lifetime in terms of wear resistance of the surface of the protective layer contacted by the yarn windings.
DESCRIPTION OF DRAWING(S) - The figure shows a cross-section of a reflector body fitted in a storage drum of the yarn feeder.
Storage body (3)
Light transparent protective layer (5)
Free surface (13)
Groove (18)
Opening edge (19)
Recess (20)
Inner fixation boss (21)
Top surface (23)
Bonding agent (24)
Reflector surface (B)
Ceramic material (C)
Reflector body (P)
pp; 16 DwgNo 3/3
Technology Focus:
TECHNOLOGY FOCUS - CERAMICS AND GLASS - Preferred Material: The protective layer as a whole comprises amorphous ceramic material from sapphire glass, zirconium glass, hafnium glass, quartz glass, or crystalline aluminoxide.
MECHANICAL ENGINEERING - Preferred Component: The free surface of the protective layer is optically polished. The protective layer has a

lower, preferably optically well-polished surface extending at least parallel to the free surface. The reflector surface is a metallic coating provided at the lower side of the protective layer. The reflector surface is covered at the side opposite to the protective layer by a protective coating, preferably by a protective paint coating extending around the edge of the reflector surface at least to the outer edge of the protective layer. The protective layer and the reflector surface, and, also the protective coating together form a reflector body (P) of rectangular, rectangular and rounded, oval or round shape. The reflector body is fixed in a recess (20) of the storage body, preferably by a bonding agent (24) or pottant. The recess includes annular, endless, foss-like groove (18) defining the opening edge (19) of the recess. The groove encompasses least one inner fixation boss (21), the top surface (23) of which is situated lower than the opening edge. The reflector body is fixed on the top surface by the bonding agent or a pottant filling the groove at least partially and extends to the outer edge of the reflector body for sealing the transition from the fixation boss to the reflector body and the transition from the reflector surface to the protective layer. The top surface of the fixation boss is smaller than the lower side of the reflector body. The bonding agent or the pottant fills the groove up to or almost up to the full height of the surface of the protective layer. The reflector surface is made, preferably on the lower side of the protective layer by ***metal*** ***vacuum*** vapor deposition by electronic beam evaporation vacuum vapor deposition. It is provided on a carrier arranged in contact with or, alternatively, spaced apart from the protective layer. It is well-polished surface of a metallic carrier. The reflector layer is defined by a mirror surface provided on a glass or plastic carrier. Preferred Property: The hardness at least at the free surface (13) is more than 1000 (2000) Hv.

Derwent Class: F02; Q36; S03
International Patent Class (Main): B65H-051/22
International Patent Class (Additional): G01V-008/14

84/34/38 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016569720 **Image available**
WPI Acc No: 2004-728457/200471
Production of a colored polymeric article, e.g. fiber, involves melt processing a blend of an unformulated heat-stable black, blue or violet dye and a polymeric material
Patent Assignee: BABLER F (BABL-I); PEETERS L F (PEET-I); CIBA SPECIALTY CHEM HOLDING INC (CIBA)
Inventor: BABLER F; PEETERS L F; BAEBLER F; PEETERS L
Number of Countries: 108 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200483270	A2	20040930	WO 2004EP50269	A	20040308	200471 B
US 20040217512	A1	20041104	US 2003455640	P	20030318	200473
			US 2004795544	A	20040308	

Priority Applications (No Type Date): US 2003455640 P 20030318; US 2004795544 A 20040308
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200483270	A2	E	21	C08G-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ

TR TZ UG ZM ZW
US 20040217512 A1 B29C-047/00 Provisional application US 2003455640

Abstract (Basic): WO 200483270 A2

NOVELTY - Production of a colored polymeric article involves melt processing a blend of at least one unformulated heat-stable black, blue or violet dye and a polymeric material (P1) in a melt processing device, where at least one portion of the device operates, at least part of the time, at a temperature of greater than 220 degreesC

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) production of a colored polymeric fiber involves ***melt*** ***spinning*** a blend of the unformulated heat-stable black, blue or violet dye and a polymeric material (P2) in a ***melt*** ***spinning*** device, where at least one portion of the device operates at a temperature of greater than 220 degrees C; and

(2) production of a solid colored polymeric article involving polymerizing caprolactam or alkylene dihydroxy or alkylene diamino condensation monomers with aliphatic or aromatic dicarboxylic acid condensation monomers in the presence of at least one unformulated heat-stable black, blue or violet dye (0.01-50 weight%). The ***polymer*** portion or substantially all of the ***polymer*** portion of the article consists of ***polymer***(s) with a melt temperature of greater than 240 degrees C.

USE - For the production of a colored polymeric fiber e.g. polyamide and polyester fiber (claimed) such as textile fibers including nylon-6. Also useful for coloring polyamide articles e.g. flocks, granules, wires, ribbons, foils, sheets and molded parts.

ADVANTAGE - The methods eliminate the need for acid bath dyeing of high melt polymeric materials. They provide strongly colored polymeric articles having excellent heat and good light stability for textiles and other applications. Since the dye is completely dissolved during processing in the polymeric material, considerably less dye is used as compared with organic pigments, to obtain certain color strength. Additionally, no pressure build up due to clogging of the ***spinnerets*** is observed when spun into fibers, even when spinning extremely low denier fibers. The fibers are strongly colored, exhibiting a high chroma and a high transparency. The woven textiles are more homogeneously colored when compared to a bath dyed piece of textile. The colorations obtained, for example in plastics or fibers, have good all-round fastness properties such as high transparency, good fastness to bleed, migration, bleach resistance, heat, light and weathering. It is possible to generate colorations having a unique ***reflection*** spectrum. Therefore, polymeric ***fibers*** can be colored to obtain shades and fiber properties with a durability and a high transparency similar or better to bath dyed fibers with the great advantage of using the more economic and environmentally friendly ***melt*** ***spinning*** process.

pp; 21 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - ***POLYMERS*** - Preferred Components: (P1) is polyethylene terephthalate, polytrimethylene terephthalate, polybutylene terephthalate, polylactic acid, polyamide-6, polyamide-12, polyamide-6,6 or polyamide-6,12. (P2) is nylon-6, nylon-12, nylon-6,6, nylon-6,12, polyethylene terephthalate or polytrimethylene terephthalate.

ORGANIC CHEMISTRY - Preferred Components: At least one unformulated dye (0.01-50, preferably 0.01-3 weight%) is selected from a ***metal*** complex black dye such as a diazo chromium complex of formula (I), a blue anthraquinone dye of formula (II), a blue anthraquinone dye of formula (III) and a violet anthraquinone dye of formula (IV).

M=Na, K, Li, NH4, NH2(C2H4OH), NH(C2H4OH)2 or N(C2H4OH)3;

R4=H or -CH2-NH-CO-Y;

Y=1-4C alkyl, 2-4C alkenyl or a single or double ring aryl (all optionally substituted at least once with Cl and/or F.

At least one R4 group is other than hydrogen

Extension Abstract:
EXAMPLE - A colored polymeric fiber was prepared by ***vacuum*** drying nylon 6 granules at 82 degrees C for 12 hours. Dried nylon 6 (500 g), black ***metal*** complex dye (2-naphthalenol-1-((2-hydroxy-4-nitrophenyl)azo) chromium complex sodium salt (0.5 g), calcium stearate (1.75 g), AC-8A (RTM; polyethylene) (1.75 g), IRGANOX B1171 (RTM) (1.25 g), CHIMASSORB 944L (RTM) (2.5 g) and Tinuvin 770 (RTM) (2.5 g) were mixed, extruded and granulated. The granules were desiccant dried for 18 hours. The granules were spun into 9 denier fibers under standard conditions resulting in a deep black fiber with an attractive appearance. No pressure build up during the spinning process was observed and no aggregates were noticed when the fibers were observed under the microscope.

The fiber was wrapped onto a card and subjected to a light fastness test and wet fastness test. It was found that nylon-6 fibers colored by the ***melt*** ***spinning*** process with the unformulated black dye manifested excellent heat stability and excellent textile fastness properties. The ***reflection*** spectra of the ***fibers*** showed a strong absorption at 400-640 nm and a strong reflection starting in the near infrared region above 640 nm.

Derwent Class: A23; A32; E21; E24; F01; F06
International Patent Class (Main): B29C-047/00; C08G-000/00

84/34/39 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016548712 **Image available**
WPI Acc No: 2004-707453/200469
Recurrent ***reflective*** synthetic ***filament*** ***yarn*** for, e.g. traffic signs, sportswear, sporting goods, bags, or military recognition signs, for safety applications, comprises filament including ***vacuum*** -***metallized*** spherical ***glass*** ***beads***
Patent Assignee: KANG K (KANG-I)
Inventor: KANG K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040180199	A1	20040916	US 2002150697	A	20020517	200469 B
			US 2004808873	A	20040318	

Priority Applications (No Type Date): US 2004808873 A 20040318; US 2002150697 A 20020517
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040180199	A1		16	D02G-003/00	CIP of application US 2002150697

Abstract (Basic): US 20040180199 A1
NOVELTY - A ***recurrent*** ***reflective*** synthetic ***filament*** ***yarn***, comprises filament including ***vacuum***-***metallized*** spherical ***glass*** ***beads*** each having a bead size of 30-50 microns and a ***refractive*** ***index*** of 1.5-2.2, where 0.25-0.50 of an entire surface area of the spherical ***glass*** ***beads*** are ***vacuum***-***metallized*** with a material having a ***reflection*** function. The ***filament*** includes a synthetic ***resin***.

DETAILED DESCRIPTION - A ***recurrent*** ***reflective*** synthetic ***filament*** ***yarn*** (10), comprises filament including ***vacuum***-***metallized*** spherical ***glass*** ***beads*** (20) each having a bead size of 30-50 microns and a ***refractive*** ***index*** of 1.5-2.2, where 0.25-0.50 of an entire surface area of the spherical ***glass*** ***beads*** are ***vacuum***-***metallized*** with a material having a ***reflection*** function. The ***filament*** includes a synthetic ***resin***, where 5-25 weight% filament is the

glass ***beads*** and 95-75 weight% of the filament is the synthetic fiber ***resin*** (30). An INDEPENDENT CLAIM is also included for a process for the production of ***recurrent*** ***reflective*** synthetic ***filament*** ***yarn***, comprising ***melt***-***spinning*** a mixture of ***glass*** ***beads*** and a synthetic fiber ***resin*** through a ***spinneret***, the beads being ***vacuum***-***metallized*** with a material having a reflection function; positioning an ***electric*** ***field*** around the ***spinneret***; and passing the filament through the ***electric*** ***field*** before the filament is solidified, where the ***glass*** ***beads*** in the filament rotate so that the ***metallized*** parts of the ***glass*** ***beads*** all point in a same direction.

USE - For, e.g. traffic signs, sportswear, sporting goods, bags, or military recognition signs, for safety applications.

ADVANTAGE - The filament yarns, in which the ***metallized*** parts of the ***glass*** ***beads*** point in the same direction, act as the ***recurrent*** ***reflective*** ***yarn***, and if the filament yarns are mixed with other filament ***yarns***, the light recurrently ***reflected*** by the ***filament*** ***yarn*** is again recurrently ***reflected*** by the other ***filament*** yarns, thus realizing an omnidirectional reflection effect.

DESCRIPTION OF DRAWING(S) - The figure schematically illustrates a mechanism of reflection of light in an omnidirectional ***reflective*** ***filament*** ***yarn*** (synthetic ***fiber*** filament).

Filament yarn (10)
Glass ***beads*** (20)
Synthetic fiber ***resin*** (30)
Non-***metallized*** part (21)
Metallized part (22)
pp; 16 DwgNo 3/9

Technology Focus:

TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Components: The material having the antireflective function is aluminum, nickel, or silver. Preferred Method: The method comprises adding 0.2-0.5 weight% ***dioctylphthalate*** as a softener and 0.2-0.5 weight% calcium antiadditive as a dispersing agent into the synthetic fiber ***resin*** to uniformly mix the ***glass*** ***beads*** with the synthetic fiber ***resin***, to provide softness to the synthetic fiber ***resin*** during the ***melt***-***spinning*** of a mixture of the ***glass*** ***beads*** and synthetic fiber ***resin***, and to improve the softness of the ***recurrent*** ***reflective*** synthetic ***filament*** ***yarn***.

Derwent Class: F02
International Patent Class (Main): D02G-003/00

84/34/40 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016411478 **Image available**
WPI Acc No: 2004-569390/200455
Side-pumped, fiber laser system for use as fiber laser amplifiers comprises a double clad laser fiber and delivery fibers
Patent Assignee: PC PHOTONICS CORP (PCPH-N)
Inventor: CHEO P K; KING G G
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6766075	B1	20040720	US 2001290283	P	20010511	200455	B
			US 200276193	A	20020213		

Priority Applications (No Type Date): US 2001290283 P 20010511; US 200276193 A 20020213
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

US 6766075 B1 7 G02B-006/26 Provisional application US 2001290283

Abstract (Basic): US 6766075 B1

NOVELTY - A side-pumped, fiber laser system comprises a double clad laser fiber (51) and delivery fibers (62). The laser fiber has a numerical aperture and flat surface, and has cores doped with element(s), which is photo-emissive in response to electromagnetic radiation of a particular wavelength. Each fiber is contiguous with the periphery of internal cladding of the laser fiber.

DETAILED DESCRIPTION - A side-pumped, fiber laser system comprises a double clad laser fiber, and delivery fibers. The laser fiber has a numerical aperture and flat surface, and has at least one core doped with element(s), which is photo-emissive in response to electromagnetic radiation of a particular wavelength. Each fiber is contiguous with the periphery of internal cladding of the laser fiber. Each delivery fiber delivers an electromagnetic radiation into the laser fiber at an acute angle selected to provide substantially total internal ***reflection*** within the laser ***fiber*** of any electromagnetic radiation transmitted into the internal cladding. Each delivery fiber has a numerical aperture, which is one-half or less of the numerical aperture of the laser fiber. The ***refractive*** ***index*** of the core of each the delivery fiber is equal to the ***refractive*** ***index*** of the inner cladding (54) of the laser fiber.

USE - For use as fiber laser amplifiers.

ADVANTAGE - The inventive optical fiber system has reduced maintenance cost. A delivery fiber may be attached using a commercial fusion splicer with reduced insertion loss. The clad pumped fiber system has a preserved integrity, despite of the bonding of many delivery fibers at any location along the peripheral wall of the system, as desired.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of a side-pumped laser employing the multiple delivery fibers wrapped around the drum.

Double clad fiber (51)
Multiple cores (52)
Drum (53)
Inner cladding layer (54)
Outer cladding (55)
Delivery fibers (62)
pp; 7 DwgNo 7/7

Technology Focus:

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Components: The delivery fibers are attached to the periphery by fusion or by bonding with epoxy ***resin***. The delivery fibers are attached to the periphery by adhesive having an effective ***index*** of ***refraction*** substantially the same as the ***index*** of ***refraction*** of the core of each the delivery fiber. The delivery fibers are attached to the periphery along substantially the entire length of the laser fiber. The system further comprises a substrate structure, and the laser fiber is wrapped around the substrate structure. The laser fiber may have a single core or multiple cores (52).

POLYMERS - Preferred Component: The delivery fibres are attached to the periphery by fusion or by bonding with epoxy ***resin***.

Derwent Class: A89; P81; V07; V08
International Patent Class (Main): G02B-006/26

84/34/41 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016351860 **Image available**
WPI Acc No: 2004-509764/200449
Thread shake analysis method for analyzing spun thread involves

transmitting laser light across threads from ***spinneret*** and analyzing shake situation from photograph of reflected light
Patent Assignee: TEIJIN FIBER KK (TEIJ-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
JP 2004162232 A 20040610 JP 2002331926 A 20021115 200449 B

Priority Applications (No Type Date): JP 2002331926 A 20021115
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 2004162232 A 12 D01D-005/08

Abstract (Basic): JP 2004162232 A
NOVELTY - A laser light (L) is transmitted with respect to the thread (Y) consisting of a single fiber group whose ***melt*** ***spinning*** is carried out from a ***spinneret*** (11) and the light ***reflected*** from each ***fiber*** is continuously photographed over a set time. The image processing of light spot of each fiber is carried out based on the photograph. The shake situation of (Y) is analyzed from the extracted light spot.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for thread shake analysis apparatus.
USE - For analyzing shake generation situation of spun threads during ***melt*** ***spinning*** of synthetic fiber threads such as polyester, polyamide and polyolefin.
ADVANTAGE - The shake situation of the spun threads resulting from cooling air can be analyzed easily by image processing and the disorder of evolving air which cools the threads can be detected. The abnormality of thread size can be detected and thus transportation of products having size abnormality to the market can be prevented.
DESCRIPTION OF DRAWING(S) - The figure shows the front elevational view and side view of thread shake analysis apparatus.
light transmitter (1)
image pick-up device (2)
image processor (3)
spinneret (11)
laser light (L)
thread (Y)
pp; 12 DwgNo 2/8
Derwent Class: A32; F01
International Patent Class (Main): D01D-005/08

84/34/42 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016266424 **Image available**
WPI Acc No: 2004-424318/200440
Ozone gas supply apparatus for medical treatment of human being and livestock, has process pipe group detachably connected to ozone storage cylinder, having several ozone gas extraction units arranged in middle
Patent Assignee: IWATANI IND CO LTD (IWAN)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
JP 2004154516 A 20040603 JP 2002358747 A 20021106 200440 B

Priority Applications (No Type Date): JP 2002358747 A 20021106
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 2004154516 A 18 A61D-007/00

Abstract (Basic): JP 2004154516 A
NOVELTY - A process pipe group (L1-L4) detachably connected to an

ozone storage cylinder (1), has a ozone decomposer (4) connected at terminal end and several ozone gas extraction units (L5,6,L8) arranged in the middle.

DETAILED DESCRIPTION - The gas extraction unit (L8) which is a branch pipe supplies ozone gas to ozone medical devices such as ozone gas pouring nozzle inserted in ozone gas extraction unit (L5) which is a branched pipe. An adapter (6) connected to the extraction unit (L5) is mounted with a ozone gas syringe which is detachably connected to a ozone bag which covers the affected region of the patient. An oxygen pipe (L6) attached to an oxygen cylinder (7) is connected to the process pipe. The extraction units supplies ozone gas mixed and diluted with oxygen gas. An ozone densitometer (3) is arranged at the process-pipe group. Based on the output of the densitometer, the mix ratio and amount of mixing of the ozone gas supplied from the ozone cylinder and the oxygen gas supplied from the oxygen cylinder is adjusted. An automatic controller (8,2a,2b) controls the flow amount and the ozone concentration of the ozone and oxygen mixed gas. A ***vacuum*** pipe(***L7***) fixed to a vacuum pump (5) is connected to the process line. Pressurized packing of ozone is carried out in the ozone cylinder which is preserved under low temperature. The adapter has main cylinder (10) with annular seal fixed opening at front end for mounting syringe. When syringe is not mounted, the syringe mounting opening is closed. A movable valve releases the obstruction of the opening, during mounting of syringe. The movable valve large diameter portion has rear gas channel along axial direction. Vertical and horizontal route (14b, 14a) are opened at front end of the small diameter portion of the valve. Elastic unit in the main cylinder, urges the small diameter portion of the valve towards the syringe mounting opening, so as to close the opening, when front end nozzle of the syringe resists the biasing force of the elastic unit and is inserted into the opening.

An INDEPENDENT CLAIM is also included for the adapter for mounting ozone gas syringe.

USE - The apparatus is useful for the supply of ozone gas for medical treatment of human body and livestock.

ADVANTAGE - Since ozone storage cylinder is used, it is not necessary to convey an ozonizer to treatment spot. Therefore burden of the doctor and the patient is reduced. Extraction of the ozone gas is performed easily due to the syringe. Provides simple structure since adapter is stably attached for a long period of time and stabilized quantity of the ozone gas is supplied to the patient. The ozone treatment in any medical institution is made easy.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of the ozone gas supply apparatus. (Drawing includes non-English language text).

Ozone storage cylinder (1)
Flow control valves (2a,2b)
Ozone decomposer (4)
Adapter for syringe connection (6)
Oxygen cylinder (7)
Controller (8)
Pipings (L1-L8)
pp; 18 DwgNo 1/10

Derwent Class: B07; P32; P34; S05; X27
International Patent Class (Main): A61D-007/00
International Patent Class (Additional): A61D-001/02; A61M-031/00

84/34/43 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015983819 **Image available**
WPI Acc No: 2004-141669/200414
Omnidirectional ***reflective*** ***yarn*** for use as embroidery yarn in, e.g. mechanical embroidery, comprises synthetic yarn produced using

synthetic ***resin*** with fiber formative function, and ***metallized*** ***glass*** ***beads***
Patent Assignee: KANG K (KANG-I)
Inventor: KANG K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030215631	A1	20031120	US 2002150697	A	20020517	200414	B

Priority Applications (No Type Date): US 2002150697 A 20020517
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030215631	A1		9	D02G-003/00	

Abstract (Basic): US 20030215631 A1

NOVELTY - An omnidirectional ***reflective*** ***yarn*** (10) comprises synthetic yarn produced using synthetic ***resin*** (30) with fiber formative function through ***melt***-***spinning***, and ***metallized*** ***glass*** ***beads*** (20) (5-25 weight%) with 1/4-1/2 of its surface area ***vacuum*** fitted with material having reflective function.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of producing omnidirectional ***reflective*** ***yarn*** comprising ***vacuum***-***metallizing*** a material having reflective function on surfaces of spherical ***glass*** ***beads***, ***melt***-***spinning*** ***metallized*** ***glass*** ***beads*** with synthetic ***resin*** having fiber formative function or ***melt***-***spinning*** the ***metallized*** ***glass*** ***beads*** and the synthetic ***resin*** in conjunction with non-***metallized*** ***glass*** ***beads*** and/or pearl beads (21) to produce monofilaments or hollow fibers, and doubling the monofilaments or the hollow fibers.

USE - For use as embroidery yarn in mechanical embroidery, computer embroidery, and sewing.

ADVANTAGE - The invention provides good texture, improved workability, and excellent color fastness to washing. The physical properties are not changed after washing.

DESCRIPTION OF DRAWING(S) - The figure schematically illustrates a mechanism of reflection of light beams in omnidirectional ***reflective*** ***yarn***.

Omnidirectional ***reflective*** ***yarn*** (10)
Metallized ***glass*** ***beads*** (20)
Non-***metallized*** ***glass*** ***beads*** and/or pearl beads (21)
Metallized part of ***metallized*** ***glass*** ***bead*** (22)
Synthetic ***resin*** (30)
pp; 9 DwgNo 3/5

Technology Focus:

TECHNOLOGY FOCUS - CERAMICS AND GLASS - Preferred Composition: The omnidirectional ***reflective*** ***yarn*** further includes (wt.5) non-***metallized*** ***glass*** ***beads*** and/or pearl beads (at most10).

Preferred Property: The ***glass*** and pearl ***beads*** are 10-50mum in head size and take a shape of a sphere. The ***metallized*** ***glass*** ***beads*** have specific weight of 4.2, and reflective index of 1.93+/-0.02 in 100%.

Preferred Process: A softener (0.5 weight%) and dispersing agent (0.2-0.5 weight%) are used to uniformly mixed beads with the synthetic ***resin*** to provide and improve softness of the omnidirectional ***reflective*** ***yarn***. Preferred Material: The softener is ***dioctylphthalate*** (DOP), and ***dispersing*** agent is ***calcium*** antiadditive.

INORGANIC CHEMISTRY - Preferred Material: The material having ***reflective*** function is ***aluminum***.

Derwent Class: F02

International Patent Class (Main): D02G-003/00

84/34/44 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015558702
WPI Acc No: 2003-620858/200359
Retro-***reflecting*** ***thread*** for retro-***reflecting*** textile used for clothes, contains slit ***yarn*** with re-***reflectivity***, and has preset width and strength
Patent Assignee: TEIJIN LTD (TEIJ)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2003020535	A	20030124	JP 2001201813	A	20010703	200359	B

Priority Applications (No Type Date): JP 2001201813 A 20010703
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2003020535	A		5	D02G-003/44	

Abstract (Basic): JP 2003020535 A

NOVELTY - A retro-***reflecting*** ***thread*** contains a slit ***yarn*** with re-***reflectivity***, and has width of 0.1-0.4 mm and strength of 340 cN or more.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) a retro-reflecting textile which is obtained by mixed knitting weave of retro-***reflecting*** ***thread*** and other ***thread***; and

(2) clothes using the retro-***reflecting*** ***thread***.

USE - For a retro-reflecting textile used for clothes (claimed), such as industrial clothing.

ADVANTAGE - The clothes using the retro-reflecting textile, has excellent visibility in dark and during night time.

pp; 5 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred ***Thread***: The retro-***reflecting*** ***thread*** has slit ***yarn*** in core portion of a covering thread. The covering thread is made of two threads of size 30-200 dtex. One thread is of S twist and other thread is twisted yarn of Z twist, each with number of twistings of 100-1000 T/m. The retro-***reflecting*** ***thread*** also contains ***thread*** other than slit yarn. The slit yarn contains fixed transparent micro glass bulb.

Preferred Textile: The retro-***reflecting*** ***thread*** is arranged at intervals of 1-30 mm in the retro-reflecting textile. The retro-reflecting textile has retention of re-reflectivity after washing for 50 times of 40% or more.

Extension Abstract:

EXAMPLE - A polyester group synthetic ***resin*** solution was ***coated*** on an ***aluminum*** vapor deposition polyester film. A transparent micro glass bulb with ***refractive*** ***index*** of 1.93 and average diameter of 30 mum was adhered. Excess bulb adhered was removed under ***vacuum***, and polyester group synthetic ***resin*** solution was again coated on the surface. A polyester group adhesive agent was applied on front and back surfaces to form a retro-***reflecting*** slit ***yarn*** with width of 0.3 mm. A polyester filament with size of 56 dtex, strength of 220 cN and elasticity of 30% as sheath portion was covered to slit yarn as core portion by S twisting and Z twisting with number of twistings of 200 T/m. A retro-***reflecting*** ***thread*** with width of thick and thin portions of 0.35 mm and 0.3 mm, respectively, size of 930 dtex, strength of 440 cN, and elasticity of 17%, was obtained. A retro-reflecting textile was

formed using the retro-***reflecting*** ***thread***. The textile had L0 of 0.78 and L50 of 0.51.
Derwent Class: F02; F03; P21
International Patent Class (Main): D02G-003/44
International Patent Class (Additional): A41D-001/00; A41D-013/00; A41D-031/00; D02G-003/04; D02G-003/06; D02G-003/36; D03D-015/00

84/34/45 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015367506 **Image available**
WPI Acc No: 2003-428444/200340
Aviation landing lamp for aircraft, comprises bulb containing coiled tungsten filament within halogen gas tight envelope
Patent Assignee: AMGLO KEMLITE LAB INC (AMGL-N)
Inventor: NGUYEN Q; POWELL J E
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6483232	B1	20021119	US 2000616580	A	20000714	200340	B

Priority Applications (No Type Date): US 2000616580 A 20000714
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6483232	B1		8	H01J-005/16	

Abstract (Basic): US 6483232 B1
NOVELTY - The aviation landing lamp comprises a bulb mounted on a pair of support posts (26, 28). The bulb contains a coiled tungsten filament (44) within a halogen gas tight envelope (18).
DETAILED DESCRIPTION - The aviation landing lamp comprises:
(i) a lens (12) bonded to a gas tight enclosure containing a protective gas;
(ii) gas tight enclosure surrounded by a parabolically-shaped reflector housing having a high gloss reflective coating on an inner surface;
(iii) bulb mounted on a pair of support posts;
(iv) exterior enclosure of the bulb surrounding a gas tight envelope containing a halogen gas and a coiled tungsten filament having first and second end mounted within the envelope;
(v) bulb gas tight envelope integral with a tulip shaped end portion at a first and second end of the bulb with a ***metal*** end cap (76, 78) enclosing each tulip shaped end portion; and
(vi) bore (82, 84) in each end cap for axially receiving a protruding lead wire (54, 56) for soldering to a first end of an electrical conductor (30, 32). The posts pass through bores in the reflector housing and in turn each post mounted on a ferrule (34, 36) attached to an outer surface (41) of the ***reflector*** housing. The ***filament*** is capable of emitting at least 250 watts. A tungsten wire (46, 48) connects the tungsten filament to a ***metal*** foil (50, 52) at both the first and second end of the tungsten filament. The protruding lead wire is connected to each foil. The lead wires is directed axially away from the tungsten filament. A second end of the electrical conductor is soldered to the support post.
An INDEPENDENT CLAIM is included for a bulb for use in aviation landing lamp comprising:
(a) a gas tight envelope enclosing a halogen gas;
(b) a tulip shaped end portion integral with a first and second end of the gas tight envelope;
(c) oiled tungsten filament having first and second ends capable of emitting at least 250 watts;
(d) first and second tungsten wire attached axially to the first and second end of the filament;
(e) an end of the tungsten wire distal from the tungsten filament

electrically bonded to an electrically conductive ***metal*** foil at a first end of each foil; (vi) a second end of each foil bonded to a protruding lead wire directed axially through the gas tight envelope to one end portion of the gas tight envelope; and (vii) a ***metal*** end cap enclosing each end portion axially and having a bore. The protruding lead wire soldered to an electrical conductor within the bore.

USE - For aircraft.

ADVANTAGE - The invention has increased durability and vibration resistance to withstand a greater aircraft landings without causing failure.

DESCRIPTION OF DRAWING(S) - The figures is a side view of the aviation landing light and an exploded view of the improved bulb.

Lens (12)
Flame seal (14)
Reflector (16)
Gas tight envelope (18)
Support posts (26, 28)
Electrical conductor (30, 32)
Ferrule (34, 36)
Outer surface (41)
Tungsten filament (44)
Tungsten wire (46, 48)
Foil (50, 52)
Protruding lead wire (54, 56)
End cap (76, 78)
Bore (82)
pp; 8 DwgNo 2, 3/6

Technology Focus:

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: The lens is borosilicate which is bonded to the gas tight enclosure with a flame seal (14). The high gloss reflective surface on the inner surface of the ***reflector*** (16) is ***aluminum***. The halogen gas is fluorine.

Preferred Material: The bulb foil is made from molybdenum.

POLYMERS - Preferred Component: The lens is polycarbonate.

METALLURGY - Preferred Material: The ***metal*** end cap is made of brass.

ELECTRICAL POWER AND ENERGY - Preferred Component: The electrical conductors are silver soldered to a pair of spaced apart support posts

Derwent Class: A89; L03; W06; X26
International Patent Class (Main): H01J-005/16
International Patent Class (Additional): H01J-061/40; H01K-001/26; H01K-001/30

84/34/46 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015249936 **Image available**
WPI Acc No: 2003-310862/200330

Formation of radio frequency by engaging thermal transfer ribbon with receiver substrate while passing heat source and selectively heating the thermal transfer ribbon to transfer heat sensitive composition to the substrate

Patent Assignee: APPLETON PAPERS INC (ARJO)
Inventor: DEBRAAL J C
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020152605	A1	20021024	US 2001839126	A	20010423	200330	B
			US 2001295580	P	20010605		
			US 2001880001	A	20010614		
US 6779246	B2	20040824	US 2001839126	A	20010423	200457	
			US 2001295580	P	20010605		

US 2001880001 A 20010614

Priority Applications (No Type Date): US 2001295580 P 20010605; US 2001839126 A 20010423; US 2001880001 A 20010614

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020152605	A1		7	B23P-019/00	CIP of application US 2001839126 Provisional application US 2001295580
US 6779246	B2			H01Q-013/00	CIP of application US 2001839126 Provisional application US 2001295580

Abstract (Basic): US 20020152605 A1

NOVELTY - Radio frequency (RF) is formed by moving thermal transfer ribbon past a heat source. The thermal transfer ribbon is engaged with a receiver substrate while passing the heat source. It is selectively heated to transfer a heat sensitive composition from the thermal transfer ribbon to the receiver substrate.

DETAILED DESCRIPTION - Formation of RF involves moving a thermal transfer ribbon past a heat source, engaging the thermal transfer ribbon with a receiver substrate (16') as the thermal ribbon moves past the heat source, selectively heating the thermal transfer ribbon portions with the heat source and transferring a heat sensitive composition from the thermal transfer ribbon to the receiver substrate. The selective heating enables a desired resonating pattern of the composition to be transferred to the receiver substrate.

An INDEPENDENT CLAIM is included for a system for producing RF tags comprising a conveyor (12) for moving a substrate, a thermal print head and a heat sensitive composition on the substrate for reacting with the heat source to form RF reflective pathways (26).

USE - For forming RF tags (claimed).

ADVANTAGE - The pattern can be of multiple functionality, readable by ***reflecting*** an RF signal, optically and/or infrared scannable.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic side view of the system for forming RF reflective pathways.

Conveyor (12)
Receiver substrate (16')
RF reflective pathways (26)
pp; 7 DwgNo 2/2

Technology Focus:

TECHNOLOGY FOCUS - ELECTRONICS - Preferred Method: The method includes using the thermal print head as the heat source. It also includes using a polymeric film paper as the transfer ribbon and coating the transfer ribbon with the conductive material and with wax, binders, surfactants and/or dispersants. The transfer of the composition is performed by heating and contact of the composition with the receiver substrate. A reactive material is developed on the substrate during exposure to heat to develop the desired resonating pattern on the substrate. The pattern is bar code.

INORGANIC CHEMISTRY - Preferred Materials: The composition transferred from the thermal transfer ***ribbon*** is a RF ***reflective*** material. It can be RF reflective precursor which becomes RF ***reflective*** material upon heat application. It is ***metallic*** inks, ***metallic*** substances, ***metallic*** dispersions, ***metallic*** salts, and/or carbon base inks. The coating comprises the reactive material, chromogenic material and acidic developer material. The reactive material is copper sulfate, silver nitrate, cuprite, or tenorite.

POLYMERS - Preferred Materials: The wax is carnauba, paraffin, low molecular weight polyethylene wax. The binders are styrene butadiene ***copolymers***, polyvinyl alcohols, starch, methyl cellulose, polyethylene ***resin***, polystyrene, vinyl chloride ***polymers***, and/or vinyl acetate ***polymers***.

ORGANIC CHEMISTRY - Preferred Materials: The reactive material can be sorbitol copper formate

Derwent Class: A85; L03; P56; V04; W02
International Patent Class (Main): B23P-019/00; H01Q-013/00

International Patent Class (Additional): H01R-003/00

84/34/47 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015143085
WPI Acc No: 2003-203612/200320
Profiled polyamide yarn used for garments, has preset yarn weight, filament weight, non-circular filament cross-section and comprises preset amount of non-white pigment dispersed in polyamide
Patent Assignee: DU PONT DE NEMOURS & CO E I (DUPO); INVISTA TECHNOLOGIES SARL (INVI-N); HARRISS M G (HARR-I); MARFELL D J (MARF-I); MERIGOLD R J (MERI-I); O'DONNELL P S (ODON-I)
Inventor: HARRISS M G; MARFELL D J; MERIGOLD R J; O'DONNELL P S; ODONNELL P S
Number of Countries: 102 Number of Patents: 013
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2373256	A	20020918	GB 20016300	A	20010314	200320 B
WO 200272932	A1	20020919	WO 2002US7710	A	20020313	200320
US 20030054168	A1	20030320	US 200299175	A	20020313	200323
US 6652965	B2	20031125	US 200299175	A	20020313	200378
EP 1373608	A1	20040102	EP 2002713856	A	20020313	200409
			WO 2002US7710	A	20020313	
KR 2003084981	A	20031101	KR 2003711865	A	20030909	200418
US 20040046278	A1	20040311	US 200299175	A	20020313	200419
			US 2003637762	A	20030808	
BR 200208332	A	20040323	BR 20028332	A	20020313	200422
			WO 2002US7710	A	20020313	
AU 2002245681	A1	20020924	AU 2002245681	A	20020313	200433
JP 2004523671	W	20040805	JP 2002572176	A	20020313	200451
			WO 2002US7710	A	20020313	
MX 2003008225	A1	20040201	WO 2002US7710	A	20020313	200473
			MX 20038225	A	20030911	
TW 593808	A	20040621	TW 2002104814	A	20020314	200506
GB 2373256	B	20050330	GB 20016300	A	20010314	200523

Priority Applications (No Type Date): GB 20016300 A 20010314
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2373256	A		24	D01F-001/04	
WO 200272932	A1	E		D01F-006/60	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
US 20030054168	A1			D02G-003/00	
US 6652965	B2			D01F-006/00	
EP 1373608	A1	E		D01F-006/60	Based on patent WO 200272932
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
KR 2003084981	A			D01F-006/60	
US 20040046278	A1			B29C-047/60	Div ex application US 200299175 Div ex patent US 6652965
BR 200208332	A			D01F-006/60	Based on patent WO 200272932
AU 2002245681	A1			D01F-006/60	Based on patent WO 200272932
JP 2004523671	W		41	D01F-006/90	Based on patent WO 200272932
MX 2003008225	A1			D01D-005/253	Based on patent WO 200272932
TW 593808	A			D01F-006/60	
GB 2373256	B			D01F-001/04	

Abstract (Basic): GB 2373256 A

NOVELTY - A profiled polyamide yarn has yarn weight of 5-300 dtex, filament weight of 0.5-7 dtex, and non-circular profiled filament cross-section. The yarn comprises polyamide melt-dispersed with 0.01-3 weight% of a non-white pigment.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) a fabric comprising the profiled polyamide yarn;

(2) a garment comprising the fabric in the visible portion; and

(3) production of the profiled polyamide textile yarn which involves extruding a molten polyamide dispersed with 0.01-3 weight/weight% of a non-white pigment through several profiled non-circular ***spinneret*** holes to form a yarn.

USE - Used for garments (claimed) such as apparels.

ADVANTAGE - The yarns are soft and has enhanced ***metallic*** luster due to the combined effect of profiling and non-white pigment. The yarn has high appearance uniformity needed for apparel applications and yarn breakage is reduced during texturing, weaving and knitting operations, as the yarn has filament uniformity in Uster% of preferably 1% or less. Since the second yarn is dyed with anionic dye, the produced fabric can be selectively dyed using anionic dye, instead of having to dye the second yarn before producing the fabric. The ***metallic*** effect is enhanced as the second yarn is a yarn of higher anionic dye affinity, in order to minimize color stain on the spun colored yarn. The use of high affinity companion yarns also enables the use of high pH dyeing techniques to increase the stain blocking effect. The diabolo cross-section further provides ***metallic*** luster to the yarn.

pp; 24 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Yarn: The yarn is a partially oriented yarn (POY) or a partly drawn or fully drawn yarn (FDY). Preferably, the yarn is a low oriented yarn (LOY) that has been further processed by draw twisting or draw winding. The filament cross-section is selected from diabolo, tape and oval. The filament profile is trilobal and cross-section is elongated.

Preferred Properties: The yarn has a titre uniformity in Uster% of less than 1.5%, preferably less than 1%. The yarn has an elongation to break of 20-90%, and tenacity of 25-70 cN/tex. The trilobal filament modification ratio is in the range of 1.2-2.4, preferably 1.4-1.8. The length ratio of the longest axis of the filament cross-section to the shortest axis at right angles to the longest axis is greater than 1.5. The yarn is a textured yarn obtained by performing air jet texturing. The fabric further comprises a second ***yarn*** having a less ***reflective*** appearance than the profiled yarn, whereby the profiled yarn produces highlights in the fabric. The second yarn is in a dark color, or black. The second yarn has an amine end group (AEG) content greater than 60 moles per 106 grams. The yarn has an individual filament unit weight of less than 7 dtex, and is wound up at a speed of at least 3000 m/minutes.

INORGANIC CHEMISTRY - Preferred Pigment: The non-white pigment is selected from colored organic or inorganic pigments that are preferably insoluble in water but may be only sparingly soluble in water. The polyamide comprises less than 0.1 weight% of titanium dioxide. The fabric is dyed with an anionic dye. Preferred Yarn: The polyamide is cationic dyeable polyamide. The polyamide is melt-dispersed with 0.025-2 weight% of a non-white pigment. The profiled yarn is a cationic dyeable polyamide yarn and the second yarn is an anionic dyeable yarn

Extension Abstract:

EXAMPLE - Granules of cationic dyeable nylon 66 ***polymer*** was blended with granules of masterbatch ***polymer*** containing the desired pigment. For production of black and silver yarns, a typical masterbatch consisting of a 5% dispersion of carbon black in a polyamide matrix was mixed with granules of the ***polymer*** (anionic dyeable ***polymer***) and set as secondary masterbatch that was metered into the main ***polymer*** supply. The mixed granules were fed

to a melting device and the molten ***polymer*** was supplied to a filter pack and extruded through a ***spinneret*** plate containing capillary orifices with diabolo cross-section at 276-280degreesC. The obtained bundle of molten filaments was cooled by stream of quench air, treated with spin finish, optionally interlaced and processed in an in-line. The in-line processing involves processing on a spinning machine, passing over another set of draw rolls and heat setting using a steam box. The obtained fully drawn yarn was used directly as flat yarn for knitting or weaving. The obtained yarn had tenacity of 42.07 cN/dtex and titer uniformity (U%) of 0.76%. The yarn had boiling water shrinkage of 8.8% and TasteriskRE (product of tenacity and the square root of extension to break) value of 298.5. The yarn had yarn weight of 96 dtex and contained 26 filaments.

Derwent Class: A23; A83; F02
International Patent Class (Main): B29C-047/60; D01D-005/253; D01F-001/04; D01F-006/00; D01F-006/60; D01F-006/90; D02G-003/00
International Patent Class (Additional): D02G-001/16; D02G-003/34; D03D-015/00

84/34/48 (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014812434 **Image available**
WPI Acc No: 2002-633140/200268
Recurrent ***reflection*** ***filament***, manufacture method thereof, and ***recurrent*** ***reflection*** ***yarn*** manufactured by using the same
Patent Assignee: TEXLAND CO LTD (TEXL-N)
Inventor: KONG Y D
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
KR 2001014677	A	20010226	KR 200016995	A	20000331	200268	B
KR 355011	B	20021011	KR 200016995	A	20000331	200325	

Priority Applications (No Type Date): KR 9921810 A 19990611
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
KR 2001014677	A		1	D01F-009/08	
KR 355011	B			D01F-009/08	Previous Publ. patent KR 2001014677

Abstract (Basic): KR 2001014677 A
NOVELTY - Provided is a ***recurrent*** ***reflection*** ***filament***, which ensures flexibility of yarn required in lacing, sewing, fabricating and knitting processes and displays elegant and various colors. Also, a ***recurrent*** ***reflection*** ***yarn*** is provided which is manufactured by using the same.
DETAILED DESCRIPTION - A ***recurrent*** ***reflection*** ***filament*** is manufactured by conjugated spinning a mixture of a recurrent reflection material and a first ***polymer***, and a second ***polymer*** in a weight ratio of 5-95:95-5. The ***filament*** comprises a ***recurrent*** ***reflection*** material such as glass beads. The first and second ***polymer*** materials are at least one selected from a group consisted of nylon, polyester and polypropylene. The filament obtained from spinning process has a core layer made of the second ***polymer*** and an outer layer made of the mixture. The filament is added with pigment or reflection efficiency increasing agents.
pp; 1 DwgNo 1/10
Derwent Class: A32; F01
International Patent Class (Main): D01F-009/08

84/34/49 (Item 14 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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014720927
WPI Acc No: 2002-541631/200258
Transparent laminate manufacturing method for plasma display panel, involves laminating silver material and transparent thin film layers on which ***metallic*** oxide layer and ***metal*** film are formed by sputtering process
Patent Assignee: NITTO DENKO CORP (NITL)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2002117735	A	20020419	JP 2000309858	A	20001010	200258	B

Priority Applications (No Type Date): JP 2000309858 A 20001010
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2002117735	A		12	H01B-013/00	

Abstract (Basic): JP 2002117735 A
NOVELTY - A transparent thin film ***layer*** and a ***silver*** material thin ***film*** layer are laminated, on which a ***metallic*** oxide is formed by sputtering process. A ***metal*** film is formed after ***metallic*** oxide layer formation, using reactant sputtering process.
USE - For transparent electrode, transparent ***electromagnetic*** ***shielding*** material for display, transparent heat reflecting film, for use in filter plasma display panel, and for transparent conductive film of touch panels. Also for use as anti-***reflective*** coating on optical ***fiber***, surface protective layer, dielectric film for capacitors, insulating layer, etc.
ADVANTAGE - ***Metallic*** oxide film is formed quickly without oxidizing the ***silver*** material ***film***. The transparent laminate with high quality of transparency or electrical conductivity can be realized.
pp; 12 DwgNo 0/0
Derwent Class: L03; M13; T04; U11; U14; V05; X12
International Patent Class (Main): H01B-013/00
International Patent Class (Additional): C23C-014/08; C23C-014/34; H01B-005/14

84/34/50 (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014211187 **Image available**
WPI Acc No: 2002-031884/200204
Reflective ***fiber*** and process for its preparation
Patent Assignee: SG TRADING CO LTD (SGTR-N); SG TRADING JH (SGTR-N)
Inventor: KANG G J
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
KR 2001044327	A	20010605	KR 20015816	A	20010207	200204	B
KR 446820	B	20040901	KR 20015816	A	20010207	200505	

Priority Applications (No Type Date): KR 20015816 A 20010207
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
KR 2001044327	A		1	D02J-003/18	
KR 446820	B			D02J-003/18	Previous Publ. patent KR 2001044327

Abstract (Basic): KR 2001044327 A
NOVELTY - A process for preparing the titled ***fiber*** having

omnidirectional ***reflection*** by simultaneously expressing diffused reflection and recurrent reflective effect as well as a fiber function is provided, thereby producing ***reflective*** ***fiber*** having excellent workability and washing fastness and capable of being applied to embroidery yarn and mass-produced.

DETAILED DESCRIPTION - In a synthetic fiber yarn prepared by conventional ***melt*** ***spinning*** method, the fiber contains 5 to 25% by weight of glass particles in which a part of the surface is ***vacuum*** deposited with a reflective function and if necessary, 5 to 10% by weight of glass in which a part of the surface is not ***vacuum***-deposited with a reflective function and/or pearl particles, wherein the glass particle has a particle size of 10 to 50 micrometer and a globular shape.

pp; 1 DwgNo 1/10

Derwent Class: F01

International Patent Class (Main): D02J-003/18

84/34/51 (Item 16 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013843510 **Image available**

WPI Acc No: 2001-327723/200134

Fiber optic module for interfacing optical fibers to electronic circuit transducing communication by light or photons with electrical signal communications, has optical block with ***reflective*** surfaces, coupled to optoelectronic device on PCB

Patent Assignee: JDS UNIPHASE CORP (JDSU-N); E20 COMMUNICATIONS INC (ETWO-N)

Inventor: JIANG W; MILSTER T D; WEI C P

Number of Countries: 020 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200074277	A1	20001207	WO 2000US11050	A	20000425	200134	B
US 6901221	B1	20050531	US 99321308	A	19990527	200536	

Priority Applications (No Type Date): US 99321308 A 19990527

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200074277	A1	E	91	H04B-010/00	
US 6901221	B1			H04B-010/02	

Designated States (National): JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Abstract (Basic): WO 200074277 A1

NOVELTY - Fiber optic module includes a base having a slot and pin holes, for mounting fiber optic module in a system for coupling photons between an optoelectronic device and the optical fiber (101). A printed circuit board (PCB) is inserted into the slot perpendicular to the base, and has pins inserted into the pin holes of base.

DETAILED DESCRIPTION - Terminals of the optoelectronic device are coupled to the PCB. Optical block (102) is coupled to the optoelectronic device on the PCB to couple photons between the optoelectronic device and optical ***fiber***, and has ***reflective*** surfaces (124,125) for reflecting photons between the optoelectronic device and optical fiber. The optical block is coupled to the optoelectronic device such that an angle between the optoelectronic device and a line perpendicular to the reflective surfaces is not equal to forty five degrees or a multiple of forty five degrees.

AN INDEPENDENT CLAIM is also included for a method of launching photons into an optical fiber.

USE - For coupling photons between optoelectronic device and optical fiber. Used as fiber optic receiver, transmitter or transceiver.

ADVANTAGE - Minimizes manufacturing cost by providing lenses and reflecting surfaces in a single optical block. Avoids optical crosstalk by mounting light transmitter and light receiver offset from each other in optical block. Provides ***shielding*** for ***electromagnetic*** interference by using module outer shielded housing manufactured out of ***metal*** or ***metal*** plated plastic.

DESCRIPTION OF DRAWING(S) - Figure shows a simplified top cut-away view of the fiber optic module.

Optical fiber (101)

Optical block (102)

pp; 91 DwgNo 1/14

Derwent Class: U11; U12; V04; V07; W01; W02

International Patent Class (Main): H04B-010/00; H04B-010/02

International Patent Class (Additional): H04B-010/12; H04B-010/20

84/34/52 (Item 17 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013662912 **Image available**

WPI Acc No: 2001-147124/200115

Device for delivering radiation to a target site, e.g. the heart comprises optical apparatus proximate to the target site, forming annular light beam energy

Patent Assignee: CARDIOFOCUS INC (CARD-N); FARR N E (FARR-I); WIELER W E (WIEL-I)

Inventor: BAXTER L S; FARR N E; MACLEAN B; MCINTYRE J T; SINOFSKY E L; WIELER W E

Number of Countries: 095 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200103599	A2	20010118	WO 2000US19285	A	20000714	200115 B
AU 200062151	A	20010130	AU 200062151	A	20000714	200127
EP 1200002	A2	20020502	EP 2000948683	A	20000714	200236
			WO 2000US19285	A	20000714	
US 6423055	B1	20020723	US 99357355	A	19990714	200254
US 20020183729	A1	20021205	US 99357355	A	19990714	200301
			US 2002200357	A	20020722	
JP 2003518395	W	20030610	WO 2000US19285	A	20000714	200339
			JP 2001508888	A	20000714	
US 6572609	B1	20030603	US 99357355	A	19990714	200339
			US 2000602420	A	20000623	

Priority Applications (No Type Date): US 2000602420 A 20000623; US 99357355 A 19990714; US 2002200357 A 20020722

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200103599	A2	E	57	A61B-018/24	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200062151	A		A61B-018/24	Based on patent WO 200103599
EP 1200002	A2	E	A61B-018/24	Based on patent WO 200103599

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

US 6423055	B1		A61B-018/18	
US 20020183729	A1		A61B-018/20	Cont of application US 99357355
				Cont of patent US 6423055
JP 2003518395	W	67	A61N-005/06	Based on patent WO 200103599
US 6572609	B1		A61B-018/20	CIP of application US 99357355

Abstract (Basic): WO 200103599 A2

NOVELTY - A phototherapeutic apparatus (10) comprising a light transmitting optical fiber (12), an optical assembly coupled to the fiber for projecting an annular beam of light and a balloon (42) surrounding the optical assembly to provide upon inflation a transmission pathway for the annular light beam from the optical assembly to a target tissue site, is new.

USE - The device is used in phototherapy using optical fibers and flexible light waveguides to deliver radiation to a target site, such as the heart. The device is particularly useful in cardiac therapy.

ADVANTAGE - Traumatic stressing of the vein or artery is reduced preventing stenosis. The unnecessary scarring of exposed tissue is avoided.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross sectional view of the device including an inflated balloon attached to a flexible elongate member with the optical apparatus.

Optical apparatus (10)
Conical ***reflector*** (27)
Lumen (40)
Balloon (42)
Light energy (56)
Reflectance ***fiber*** (76)
pp; 57 DwgNo 6/23

Technology Focus:

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Apparatus: The optical apparatus. (10) comprises a light transmitting optical fiber (12), a graded index lens and a conical ***reflector*** (27). The apparatus can be slid into a lumen and is surrounded by a balloon (42). When the balloon is inflated the annular light beam energy, e.g. laser energy, (56) is transmitted through a pathway created by the balloon. A solution. e.g. water, saline or deuterium oxide is injected through the lumen (40) to inflate the balloon. When the optical fiber is connected to the graded index lens the radiation is ***reflected*** by the conical ***reflector*** projecting an annular pattern of phototherapeutic radiation. A ***reflectance*** ***fiber*** (76) is used to monitor the progress of treatment. A high ***refractive*** ***index*** material is in communication with the graded index lens and the conical ***reflector***. The high ***refractive*** ***index*** material is silicone or an epoxy ***resin***. The optical fiber and graded index lens are positioned from about 0 - 2 (preferably 0 - 0.5) mm of each other. The graded index lens has a length of 1.66 mm. The apparatus further comprises a flexible elongate member having an interior lumen extending through it for delivery of an inflation fluid, the expandable balloon is disposed about a portion of the flexible elongate member and is in fluid communication with the lumen via a port, and a pressure-relief valve is used to regulate the pressure of fluid within the balloon. The flexible elongate member is a catheter. The pressure-relief valve provides irrigation, or regulates pressure. The balloon is inflated by a conduit defined in the interior lumen of the flexible elongate member for directing fluid into the balloon. The balloon comprises a polymeric material. The balloon is adapted, when expanded, to engage and contact the tissue of a body lumen. The pressure relief valve comprises a sleeve disposed about a second port in the flexible elongate member. The apparatus further comprises an illuminator which projects light through the balloon toward a tissue surface, a collecting device positioned within the apparatus which receives reflected energy, and a detector for a wavelength of the reflected energy as an indicator or the catheter's position. The illuminator projects laser radiation, green light, both green and red light, or white light. The illuminator comprises an optical fiber. The optical fiber is also a conduit for therapeutic radiation. The optical fiber is in communication with a laser source, an arc lamp, a light emitting diode (LED), or a tungsten filament bulb. The illuminator and the collecting device share an optical conduit and operate in synchrony. The detector is a spectrometer that is in communication with a computer that indicates changes in intensity of the reflected energy as the sensor is contacted

with the tissue surface. The computer analyzes a ratio of reflected light at two wavelengths. A sheath surrounding a portion of the balloon enhances the collection of reflected radiation. The sheath comprises a polyethylene terephthalate ***polymer***, which contains light scattering particles.
Derwent Class: A96; B07; K08; P31; P34
International Patent Class (Main): A61B-018/18; A61B-018/20; A61B-018/24; A61N-005/06
International Patent Class (Additional): A61M-025/00

84/34/53 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013460352 **Image available**
WPI Acc No: 2000-632295/200061
Polygonal shaped fiber for fiber products such as clothes, twisted yarn, consists of synthetic or inorganic fiber having polygonal shaped cross section with sharp angles
Patent Assignee: KACHI M (KACH-I)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2000248419	A	20000912	JP 99370534	A	19991227	200061	B

Priority Applications (No Type Date): JP 98372971 A 19981228
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000248419	A		7	D01D-005/253	

Abstract (Basic): JP 2000248419 A
NOVELTY - Polygonal shaped fiber consists of synthetic or inorganic fiber. The fiber has polygonal shaped cross section with sharp angles.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for manufacture of polygonal shaped fiber. The fiber is manufactured by sea island ***melt*** ***spinning*** method. Several ***spinneret*** opening of island component are arranged inside the ***spinneret*** openings of sea component. The ***spinnerets*** openings are mutually joined at the edge which correspond to the edge of polygon. The other edges are dented inside the polygon.
USE - For fiber products (claimed) such as non twisted yarn, twisted yarn, woven cloth, nonwoven fabric, hair transplant goods, pile-raising goods, presents, advertisement, traffic signs, dress, accessories e.g. rain coat, umbrella, baby carriage, ruck sack, bag, stick, suit, coat, hat, sports articles e.g. tennis ball, and as optical ***reflective*** ***fibers***.
ADVANTAGE - The fiber has high degree of reflection, hence brightness is increased sharply and fiber is visible in dark. The fiber can be manufactured by inexpensive and simple method.
DESCRIPTION OF DRAWING(S) - The figure shows the cross sectional view of polygonal fiber.
pp; 7 DwgNo 2/6
Technology Focus:
TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Shape: The shape is right angle isosceles triangle with sharp angles and the fiber is transparent.
Derwent Class: A94; F01; P36
International Patent Class (Main): D01D-005/253
International Patent Class (Additional): A63B-037/00; D01D-005/30; D01F-006/00; D06M-011/38

84/34/54 (Item 19 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013460109 **Image available**
WPI Acc No: 2000-632052/200061
Fiber product with luminous ***reflector*** has ***glass*** ***bead*** ***coated*** with thin ***aluminum***, and colorless and transparent clear coating material layer containing luminous paint are sequentially provided
Patent Assignee: AMITI YG (AMIT-N); MENUMA DENKA KOGYO KK (MENU-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2000239982	A	20000905	JP 9942240	A	19990219	200061	B

Priority Applications (No Type Date): JP 9942240 A 19990219
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000239982	A		5	D06Q-001/10	

Abstract (Basic): JP 2000239982 A
NOVELTY - Colorless and transparent clear coating material (CTCM) layer (2) and hemispherical globular ***glass*** ***bead*** (4) ***coated*** with thin ***aluminum*** ***layer*** are sequentially provided on fiber product (1). Layer (2) is mixture of luminous paint having luminous reflector component, dispersing agent, sedimentation inhibitor and luminous material (3), coating material stock solution containing hardener and thinner, and CTCM.
USE - In screen printing.
ADVANTAGE - The surface of fiber product emits light in darkness. Viewability of fiber product in usual brightness is carried out.
DESCRIPTION OF DRAWING(S) - The figure shows the model figure of fiber product.
Fiber product (1)
Colorless and transparent clear coating material layer (2)
Luminous material (3)
Bead (4)
pp; 5 DwgNo 1/4
Technology Focus:
TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Fiber Product: The fiber product is knit material, mesh material, outer layer of hose or rope. Preferred Composition: 30-40 weight% (wt.%) of luminous material, 3 wt.% of dispersing agent, 5 wt.% of sedimentation inhibitor are mixed with 100 wt.% of coating material stock solution containing 9 wt.% of hardener and 6 wt.% of thinner in a 85 wt.% of colorless and transparent clear coating material to obtain the layer (2). Preferred Material: The luminous material is subdivided with the pebble ball mill machine.
Derwent Class: F06; G02; P73
International Patent Class (Main): D06Q-001/10
International Patent Class (Additional): B32B-005/00; C09D-005/22; C09K-011/00; C09K-011/02; D06P-005/00

84/34/55 (Item 20 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013384176
WPI Acc No: 2000-556114/200051
High-strength ***recurrent*** ***reflective*** mixed ***yarn*** for sewing and manufacturing method therefor - NoAbstract
Patent Assignee: TEXLAND JH (TEXL-N)
Inventor: LEE G S
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
KR 99068451	A	19990906	KR 9918488	A	19990521	200051	B

Priority Applications (No Type Date): KR 9918488 A 19990521
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
KR 99068451 A D06Q-001/10
Derwent Class: F06
International Patent Class (Main): D06Q-001/10

84/34/56 (Item 21 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013336231 **Image available**
WPI Acc No: 2000-508170/200046
Spinneret for optical ***reflective*** composite ***fiber*** manufacture, has circular lamination formation groove at ends of opposing small holes that are filled with low and high refractive polymeric material
Patent Assignee: NISSAN MOTOR CO LTD (NSMO); TANAKA KIKINZOKU KOGYO KK (TANI); TEIJIN LTD (TEIJ)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
JP 2000178825 A 20000627 JP 98375483 A 19981216 200046 B

Priority Applications (No Type Date): JP 98375483 A 19981216
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 2000178825 A 16 D01D-005/32

Abstract (Basic): JP 2000178825 A
NOVELTY - Small holes (23,24) filled with low and high ***refractive*** ***index*** polymeric materials, are arranged opposingly such that their outflow ends do not correspond. A circular laminate formation groove (26) and narrow point fiber formation groove (27) with inclined side wall, are formed at the outflow ends of the holes and extend to outlet (35) through which composite fiber made from the two material is drawn.
USE - For optical ***reflective*** composite ***fiber*** manufacture.
ADVANTAGE - Multiple lamination grooves can be provided in single ***spinneret***, by designing the grooves as circular pattern, hence composite fiber can be manufactured efficiently.
DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of the ***spinneret***.
Holes (23,24)
Circular laminate formation groove (26)
Narrow point fiber formation groove (27)
Outlet (35)
pp; 16 DwgNo 3/25
Derwent Class: A32; F01
International Patent Class (Main): D01D-005/32
International Patent Class (Additional): D01D-005/34

84/34/57 (Item 22 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012654726 **Image available**
WPI Acc No: 1999-460831/199939
Optical module, for coupling an optical fiber to a semiconductor device
Patent Assignee: SUMITOMO ELECTRIC IND CO (SUME)
Inventor: MORIYAMA Y; SAWADA S
Number of Countries: 028 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 938005	A2	19990825	EP 99102727	A	19990219	199939	B
JP 11237531	A	19990831	JP 9838741	A	19980220	199946	
KR 99072802	A	19990927	KR 995686	A	19990220	200048	
US 6257773	B1	20010710	US 99251929	A	19990218	200141	
KR 334366	B	20020425	KR 995686	A	19990220	200270	

Priority Applications (No Type Date): JP 9838741 A 19980220

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 938005	A2	E	17	G02B-006/42	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 11237531	A		8	G02B-006/42	
KR 99072802	A			G02B-006/00	
US 6257773	B1			G02B-006/36	
KR 334366	B			G02B-006/00	Previous Publ. patent KR 99072802

Abstract (Basic): EP 938005 A2

NOVELTY - Optical module has a housing with a mounting surface for a semiconductor device, a sleeve (22) to receive a ferrule (26) attached to the end of an optical ***fiber*** (24), and a ***reflecting*** surface (14) to optically couple the optical fiber and the semiconductor device. The reflector is formed and arranged to reduce deterioration of the coupling between the optical fiber and the semiconductor device with temperature changes.

DETAILED DESCRIPTION - AN INDEPENDENT CLAIM relates to an optical reflecting member having a ***resin*** molded body with a surface of a predetermined form and a reflecting film on that surface, the film comprising a ***layer*** of ***nickel*** covered by a layer of gold.

USE - In optical communication systems .

ADVANTAGE - The coupling has a stable coupling efficiency which does not change with temperature changes during manufacture or use, and is easily adjusted during manufacture to obtain optimum coupling.

DESCRIPTION OF DRAWING(S) - The figure shows the coupling device

housing (2)
reflector body (12)
reflector surface (14)
sleeve (22)
optical fiber (24)
ferrule (26)
mounting plates (150)
stand pins (151)
counter members (170)
adhesive patches (500)
pp; 17 DwgNo 3/10

Technology Focus:

TECHNOLOGY FOCUS - ***POLYMERS*** - The optical reflecting member has a body (12) of polycarbonate

Extension Abstract:

EXAMPLE - In the EMBODIMENTS the reflector body (12) has a concave reflecting surface (14), which is a portion of a virtually defined rotational ellipsoid, and is supported between plates (150) of ***metal*** or ceramic fixed to the semiconductor mounting surface, the plates being attached to the reflector body by patches of adhesive (500) smaller than the plates. Alternatively the reflector body can be supported by stand pins (151) of ***metal*** or ceramic material between the body (12) and the semiconductor mounting surface. Counter members (170) having a thermal expansion coefficient different to that of the body (12) are embedded in the body to compensate for dimensional changes in the reflector surface (14) with changes in temperature.

Derwent Class: A89; P81; V07

International Patent Class (Main): G02B-006/00; G02B-006/36; G02B-006/42

International Patent Class (Additional): G02B-007/00; H01L-031/0232; H01S-003/18

84/34/58 (Item 23 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011704477 **Image available**
WPI Acc No: 1998-121387/199812
Melt ***spinning*** assembly - has heater and reflector aligned at spinning jets to prevent heat loss or compensate for it, for consistent spun filaments
Patent Assignee: BROWN DEUT ENG GMBH JOHN (COJB)
Inventor: EIFLAENDER I; HARTIG J
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 19631879	A1	19980212	DE 1031879	A	19960807	199812	B
DE 19631879	C2	20000330	DE 1031879	A	19960807	200020	

Priority Applications (No Type Date): DE 1031879 A 19960807
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 19631879	A1		5	D01D-005/084	
DE 19631879	C2			D01D-005/084	

Abstract (Basic): DE 19631879 A
For ***melt*** ***spinning*** ***polymer*** filaments, the ***spinneret*** jets are heated by radiation. Also claimed is an assembly with at least one heater (10) at the upper section of the blower shaft (8), outside the ***filament*** path. A ***reflector*** (11) is aligned at the under side of the spinning jets (3).
USE - This technique is used for ***melt*** ***spinning*** a large number of filaments in the production of micro-fibres, industrial fibres, staple fibres or spun-bonded fabrics.
ADVANTAGE - The system prevents heat loss, or compensates for it, at the spinning jets through convection or radiation. This evens out the molten ***polymer*** flow to give consistently spun separate filaments.
Dwg.2/4
Derwent Class: A32; F01
International Patent Class (Main): D01D-005/084
International Patent Class (Additional): D01D-013/02

84/34/59 (Item 24 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007758287
WPI Acc No: 1989-023399/198903
Head-lamp reflector made from polyphenylene sulphide - coated with silicone and ***metal*** becoming brighter with increasing temp.
Patent Assignee: PHILLIPS PETROLEUM CO (PHIP)
Inventor: BOULTINGHO H D
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4794026	A	19881227	US 85737846	A	19850524	198903	B

Priority Applications (No Type Date): US 85737846 A 19850524
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4794026	A		4		

Abstract (Basic): US 4794026 A
Reflector exhibiting increased reflectance as it is heated

comprises a polyarylene sulphide ***resin*** substrate coated with thermally cured, relatively low viscosity silicone ***resin*** forming an adherent layer, the silicone layer itself being covered by an adherent reflective layer.

The substrate is made of polyphenylene sulphide and the reflective layer is a ***metallic*** ***coating***, most pref. ***aluminium***. The ***metallic*** ***layer*** is itself covered with an exterior clear coating. The viscosity of the silicone ***resin*** is 100-200 centipoise. The ***reflector*** contains a ***filament*** which heats the surface to a temp. at which the reflective properties of the reflective surface are enhanced.

USE/ADVANTAGE - Reflector is intended for vehicle headlamps, replacing glass to reduce wt. for fuel economy. The ***metallised*** reflector surface exhibits increasing brightness with increasing temp.

0/0

Derwent Class: A26; A95; P63; X22
International Patent Class (Additional): B27N-005/02

84/34/60 (Item 25 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004809248
WPI Acc No: 1986-312589/198648
Spinneret plate with ***nozzle*** capillaries mfr. - includes layer of material with properties alterable through radiation to galvanic electrode
Patent Assignee: KERNFORSCHUNGSZENT KARLSRUHE (GESL)
Inventor: BECKER E; EHRFELD W; HAGMANN P
Number of Countries: 015 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3517730	A	19861120	DE 3517730	A	19850517	198648	B
EP 202416	A	19861126	EP 86103637	A	19860318	198648	
JP 61265217	A	19861125	JP 86110939	A	19860516	198701	
AU 8657555	A	19861120				198702	
US 4705605	A	19871110	US 86863989	A	19860516	198747	
EP 202416	B	19880810				198832	
DE 3517730	C	19890406				198914	
CA 1293950	C	19920107				199209	
JP 95039061	B2	19950501	JP 86110939	A	19860516	199522	

Priority Applications (No Type Date): DE 3517730 A 19850517
Cited Patents: DE 1627732; DE 3118335; FR 1288846; GB 1176889; GB 1422300
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3517730	A		11		
EP 202416	A	G			
Designated States (Regional): AT CH FR GB IT LI NL SE					
EP 202416	B	G			
Designated States (Regional): AT CH FR GB IT LI NL SE					
JP 95039061	B2		5	B23P-015/16	Based on patent JP 61265217

Abstract (Basic): DE 3517730 A

The properties of the material (resist material) can be changed through energy-intensive radiation. Negative moulds of the ***nozzle*** capillaries are produced through a partial radiation and partial removal of the resist material while utilising the different material properties produced through the radiation. A galvanic layer is produced to encase the negative moulds of the ***nozzle*** capillaries. The layer on the galvanic electrode is levelled and the negative moulds are removed. A complete or partial removal of the galvanic electrode follows.

ADVANTAGE - The critical proportions of the ***nozzle*** capillaries can be reduced below the limits permitted by existing

processes.
Abstract (Equivalent): EP 202416 B
Method of making ***spinneret*** plates with ***nozzle*** capillary tubes, characterised by the following method steps: (a) joining a layer of material (resist material), the properties of which are changeable as a result of energy-rich radiation, to a galvanic electrode; (b) producing negative forms of the ***nozzle*** capillary tubes, which forms are joined to the galvanic electrode, by partial irradiation and partial removal of the resist material utilising the different material properties produced by the irradiation; (c) producing a galvanic layer, which incorporates the negative forms of the ***nozzle*** capillary tubes, on the galvanic electrode; levelling the galvanic layer and removing the negative forms; (d) wholly or partially removing the galvanic electrode. (8pp)e
Abstract (Equivalent): US 4705605 A
Spinning ***nozzle*** plate for prodn. of organic or inorganic fibres are mfd. by a method in which a layer of resist material is produced by pouring a methacrylate-based casting resin, PMMA, on an electrically conductive plate. The resist material subsequently hardens and has positive resist characteristics which are changed by high-energy radiation. Negatives of the ***nozzle*** capillaries are produced by irradiating the resist in a predetermined pattern, using X rays generated by an electron synchrotron. The material is selectively removed by a developer liquid. A layer is then electrolytically deposited to enclose the ***negatives*** on the ***plate***. ***Negatives*** are then removed and at least part of the plate is also removed.
ADVANTAGE - Critical dimensions of the capillaries can be reduced at acceptable cost to give small dimension fibres. (8pp)a
Derwent Class: F01; M11; P56; P84
International Patent Class (Additional): B23P-015/16; C25D-001/08; D01D-004/02; G03F-007/26

84/34/61 (Item 26 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004809247
WPI Acc No: 1986-312588/198648
Spinneret plate mfr. - using mould plate with mould ducts corresp. to ***spinneret*** which is joined to galvanic electrode
Patent Assignee: KERNFORSCHUNGSZENT KARLSRUHE (GESL)
Inventor: BECKER E; EHRFELD W; HAGMANN P
Number of Countries: 014 Number of Patents: 010
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3517729	A	19861120	DE 3517729	A	19850517	198648	B
EP 202417	A	19861126	EP 86103640	A	19860318	198648	
JP 61265216	A	19861125	JP 86110938	A	19860516	198701	
AU 8657553	A	19861120				198702	
US 4693791	A	19870915	US 86863987	A	19860516	198739	
EP 202417	B	19880810				198832	
DE 3660468	G	19880915				198838	
DE 3517729	C	19890330				198913	
CA 1272463	A	19900807				199037	
JP 95039060	B2	19950501	JP 86110938	A	19860516	199522	

Priority Applications (No Type Date): DE 3517729 A 19850517
Cited Patents: CH 494087; DE 1627732; DE 3118335; FR 1288846; GB 1176889; GB 1422300
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3517729	A		12		
EP 202417	A	G			

Designated States (Regional): AT CH DE FR GB IT LI NL SE

EP 202417 B G
Designated States (Regional): AT CH DE FR GB IT LI NL SE
JP 95039060 B2 5 B23P-015/16 Based on patent JP 61265216

Abstract (Basic): DE 3517729 C
The mould plate with the mould ducts is joined to a galvanic electrode contg. supply ducts in such a way that the mould ducts and the supply ducts adjoin each other. Negative moulds of the ***spinneret*** ducts are produced by the filling of the mould ducts and the supply ducts with an electrically insulating moulding material and a subsequent removal of the mould ***plate***. The ***negative*** moulds of the ***spinneret*** ducts are encased in a galvanic layer, which is levelled. The negative moulds and the remaining moulding material are subsequently removed.
ADVANTAGE - The highly economical process is suitable for the mass production of ***spinneret*** plates, partic. plates with profiled ***nozzle*** capillaries. (12pp Dwg.No.0/9)
Abstract (Equivalent): DE 3517729 C
Spinning ***nozzle*** plates, for mfr of fibres, is mfd from a pattern plate contg moulding channels, which is joined to a plating electrode contg supply channels so that the moulding channels and the supply channels are adjacent. The channels are filled with an electrically insulating moulding material and the pattern plate is removed, leaving a ***negative*** mould. A ***plated*** layer is produced to surround the negative mould of the spinning ***nozzle*** channels and the mould is removed with the remainder of the moulding material.
ADVANTAGE - It is an economic process for mass prodn of ***nozzles***. (6pp)
Abstract (Equivalent): EP 202417 B
Method of making ***spinneret*** plates with ***spinneret*** channels, by utilising a shaped plate which includes channels, shaped to correspond to the ***spinneret*** channels, characterised by the following method staps: (a) joining together the shaped plate, which includes the shaped channels, and a galvanic electrode, which includes feed channels, so that the shaped channels and the feed channels communicates with one another; (b) producing negative forms of the ***spinneret*** channels, which forms are joined to the galvanic electrode, by jointly filling the shaped channels and the feed channels with an electrically insulating moulding material and subsequently removing the shaped plate; (c) producing a galvanic layer, which incorporates the negative forms of the ***spinneret*** channels, levelling this galvanic layer and removing the negative forms and the remaining moulding material. (8pp)
Abstract (Equivalent): US 4693791 A
In a method for mass prodn. of spinning ***nozzle*** plates, a mould plate contg. mould channels corresp. to the spinning ***nozzle*** channels is combined with an electrically conductive electrode contg. feed channels such that the channels communicate. After closing the channels by a cover plate, mould channels and feed channels are filled with an electrically insulating medium under vacuum. After solidification, cover plate and mould plate are removed, thus exposing negatives of the ***nozzle*** channels, connected by the moulding material with the electrode. A layer is ***plated*** onto the ***negatives***, giving a flush surface. After removal of the moulding material, a spinning ***nozzle*** plate remains.
ADVANTAGE - Economical prodn., partic. of ***nozzles*** with profiled ***nozzle*** capillaries. (6pp)
Derwent Class: F01; M11; P54; P56
International Patent Class (Additional): B23D-015/16; B23P-015/16; C25D-001/08; D01D-004/02

84/34/62 (Item 27 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004178687
WPI Acc No: 1985-005567/198501
Lightweight fireentry fabric - has alternating asbestos and ***reflective*** ***metal*** coated organic ***fibre*** layers
Patent Assignee: HOHOCKMEYER P F (HOCK-I)
Inventor: HOCKMEYER P F
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4473614	A	19840925	US 82380613	A	19820521	198501	B

Priority Applications (No Type Date): US 82380613 A 19820521
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4473614	A		6		

Abstract (Basic): US 4473614 A
Fabric comprises an outer asbestos layer, intermediate layers in pairs with one of asbestos and cotton and the other of synthetic organic fibre sheet with an outer-face coating of reflective ***metal***, and an inner layer of the organic fibres.
The organic fibres are pref. of cross-linked phenolic ***resin*** and are blended with aramid fibres, and the ***coating*** ***metal*** is ***Al***. The outer ***layer*** is pref. 100% asbestos as a plain weave, and has an outer coating of water-retardant silicone ***resin*** . Inner and outer layers are pref. held together by sewn threads.
USE/ADVANTAGE - For fighting oil and other fires or in stunt work, having improved and higher temp. resistance to both radiant heat and flame.
0/3
Derwent Class: A94; F07; L02; P73
International Patent Class (Additional): B32B-007/00

84/34/63 (Item 28 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004105774
WPI Acc No: 1984-251315/198441
Travelling wave tube - has threaded interface element to minimise reflections at end of wave guide
Patent Assignee: SIEMENS AG (SIEI)
Inventor: HUBER G
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3311910	A	19841004	DE 3311910	A	19830331	198441	B
US 4658183	A	19870414	US 84592921	A	19840323	198717	

Priority Applications (No Type Date): DE 3311910 A 19830331
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3311910	A		7		

Abstract (Basic): DE 3311910 A
The travelling wave tube has a square section wave guide that has a short circuit disc at the base. The delay time is formed by a stack of discs each with a central bore formed in a radially projecting segment. The delay time is located within a ***metallic*** ***vacuum*** housing that has a permanent magnet system.
An interface element is secured into the base by a fine thread that allows the position to be adjusted for min. reflection when HF signals are transmitted through the wave guide.
ADVANTAGE - Ease of setting for low ***reflection*** using

threaded adjuster.
0/1

Abstract (Equivalent): US 4658183 A

The travelling-wave tube includes a delay line having two end surfaces, a spatially periodic permanent magnet system surrounding the delay line for the bunched guidance of an electron beam. The delay line has line cells disposed in tandem, each of the cells having an electron beam passage opening formed in it, and adjacent partitions separating the cells with a given mutual spacing. Each of the partitions has at least one coupling opening extended in circumferential direction. A ridgeless rectangular waveguide is coupled to at least one of the end surfaces of the delay line and protrudes away from the delay line at right angles to its axis.

The waveguide has a location of smallest reflection, a wide side facing away from the delay line extended perpendicular to the longitudinal axis of the delay line and at least one narrow side being steadily tapered toward the delay line down to the given spacing of the adjacent partitions. A short-circuit slider disposed below the waveguide includes a hollow-cylindrical matching element disposed at the wide side of the waveguide facing away from the delay line. The hollow-cylindrical matching element has a fine thread screwed to the location of least reflection and fixed and soldered to the waveguide.

ADVANTAGE - Permits continuous adjustment of matching element.

Derwent Class: V05

International Patent Class (Additional): H01J-023/32; H01J-025/34

84/34/64 (Item 29 from file: 350)

DIALOG(R)File 350:Derwent WPIX

000951233

WPI Acc No: 1973-28474U/197320

Textile yarn - incorporates ***metallic*** film to produce a reflective characteristic

Patent Assignee: LUREX BV (LURE)

Number of Countries: 006 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
BE 790980	A					197320 B
DE 2254266	A	19740516				197421
NL 7214965	A	19740508				197421
FR 2205414	A	19740531				197436
GB 1415688	A	19751126				197548
AT 7209403	A	19760915				197640

Priority Applications (No Type Date): BE 790980 A 19721106

Abstract (Basic): BE 790980 A

A textile yarn having a surface coating of reflective ***metallic*** material (e.g. ***aluminium***) is ***coated*** on its reflective surface with a thin layer of a ***copolymer*** including >=75% ethylene and >=1 monomer(s) of acrylic a acid methacrylic acid or acrylic or methacrylic alcoyl ester acids with 1-3 atoms in the alcoyl gp. Pref. the ***copolymer*** coating constitutes <1.5 gm/m of the ***yarn***. A ***reflective*** coated polyethylene terephthalate film is coated on its reflective surface with a ***copolymer*** and laminated with a second reflective coated film between presser rolls such that the ***metal*** coating contacts the ***copolymer*** coating on the first film. The resulting laminated film is subsequently split into filaments. Alternatively a plastic film coated on both surfaces with a reflective coating is subsequently coated on both the surfaces with the ***copolymer***. The ***copolymer*** coating prevents the yarn from being dyed during subsequent dyeing processors and also prevents degradation.

Derwent Class: A18; A87; F01; P73

International Patent Class (Additional): B32B-015/08; B32B-031/18; D01F-009/00; D02G-003/12; D06M-015/16; D06Q-001/04

84/34/65 (Item 30 from file: 350)
DIALOG(R)File 350:Derwent WPIX

000807041
WPI Acc No: 1971-48731S/197129
Flat multifilament polyamide yarn prodn
Patent Assignee: TORAY IND INC (TORA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 71022884	B					197129 B

Priority Applications (No Type Date): JP 6824739 A 19680415

Abstract (Basic): JP 71022884 B
A flat polyamide multifilament yarn is adhered with single yarns by ***melt***-***spinning*** polyamide contg. a polyalkylene ether cpd. under special conditions. In the method, the polyamide contg. 0.1 - 2.0 millimols g polyamide of a polyalkylene ether cpd. having >10 oxyethylene or oxypropylene gps. is melt-spun to a filament and adhered with an oiling agent of oil-in-water type emulsion, then the filament is so wound that the wound unstretched ***yarn*** of double ***reflection*** index reaches value satisfying: 10 + 2a <=DELTA <=51 log10 (10a+8)-33 (where DELTAn = 103 x the double ***refraction*** ***index*** of the unsatd. yarn and a = the no. of millimoles alkylene oxide/g. polyamide).
Derwent Class: A24; A94; F01
International Patent Class (Additional): C08G-000/00; D01F-000/00

84/34/66 (Item 31 from file: 350)
DIALOG(R)File 350:Derwent WPIX

000750205
WPI Acc No: 1970-87563R/197047
Reflective sheet production
Patent Assignee: IZUMIYA S (IZU -I)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 70037595	B					197047 B

Priority Applications (No Type Date): JP 678072 A 19670208

Abstract (Basic): JP 70037595 B
Method for production of ***recurrent*** ***reflective*** ***fibre*** cloth ground includes coating a light reflective adhesive coating material (aqueous synthetic ***resin*** or chemical solvent soluble synthetic ***resin*** or oil paint) on all or part of surface of sheet form fabric ground (e.g. fibre fabric ground or other sheet) with sprayer, coating machine, screen printing machine, mechanical printer or other suitable means, making the coating material surface into half dried state before completely dried state, coating a clear coating material (water soluble synthetic ***resin*** or chemical solvent soluble synthetic ***resin*** or oil paint, etc.) contg. a great number of clear spherules uniformly dispersed, all over the sheet, and fixing on sheet by completely drying clear coating material.
Derwent Class: F06

84/34/67 (Item 32 from file: 350)
DIALOG(R)File 350:Derwent WPIX

000621064
WPI Acc No: 1968-66203P/196800
Apparatus for spinning synthetic multi lobular fibre of
Patent Assignee: ALLIED CHEM CORP (ALLC)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 3266087	A					196800	B

Priority Applications (No Type Date): US 65437822 A 19650308

Abstract (Basic): US 3266087 A
The cloverleaf design ***yarn*** produced is light ***reflective*** , and takes up less ***polymer***, covering more space, than other yarns. The ***spinneret*** plate for ***melt***-***spinning*** contains at least one group of several orifices, all except one of which are notched inwardly towards the excepted one. The orifices are so spaced that coalescence occurs among the extruded strands so that a multilobal filament results. The outer edge of the notches approach the edge of the unnotched one but do not touch it and each group of orifices has a counterbore on the ***polymer*** melt face of the plate. The plate contains at least one group of three orifices in right angle triangle arrangement, the unnotched orifice being at right angle.
Derwent Class: A00
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